



Desert Locust Bulletin

General situation during November 2021 Forecast until mid-January 2022

WESTERN REGION: CALM

SITUATION. Scattered hoppers and adults from local breeding in **Mali**; isolated adults in **Algeria, Morocco, Niger, and Mauritania**.

FORECAST. No significant developments.

CENTRAL REGION: THREAT

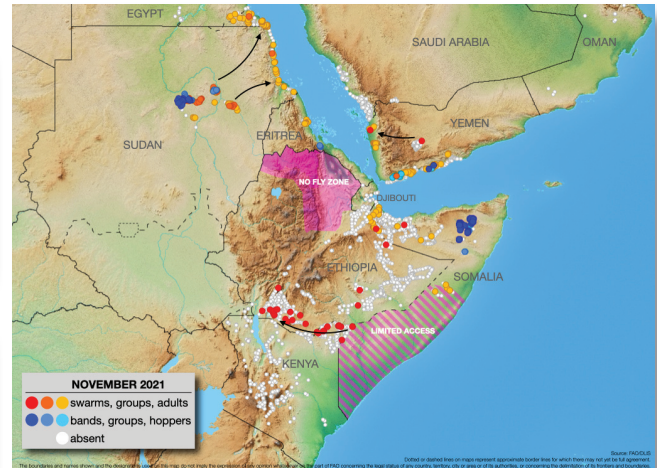
SITUATION. Control operations continue against numerous small hopper bands in northeast **Somalia** (18 405 ha treated). Mature swarms that arrived in early November in northeast **Kenya** moved to southern **Ethiopia** (2 126 ha). More bands and groups of hoppers and adults form in the interior of **Sudan** (17 735 ha) and scattered adults and one mature group appear on Red Sea coast; scattered adults appear and lay on Red Sea coast in southeast **Egypt** (100 ha). Hopper groups on Red Sea coast in **Eritrea** (97 ha) and scattered adults on the northern coast. Small-scale breeding on southern **Yemen** coast, immature swarm in the interior, and mature swarm laying and scattered adults on Red Sea coast.

FORECAST. A limited number of swarms will form in northeast **Somalia** from early December onwards. Egg laying, hatching and band formation are likely along the **Ethiopia/Kenya** border, supplemented by the arrival of several small immature swarms from northeast Somalia after mid-December. Some swarms could also reach southern Somalia. Small-scale breeding will occur along both sides of the Red Sea in coastal areas of southeast **Egypt, Sudan, Eritrea, Yemen, and Saudi Arabia** but may be limited by poor rainfall that is predicted.

EASTERN REGION: CALM

SITUATION. No locusts present.

FORECAST. No significant developments.



Control operations continue in NE Somalia

Although the current upsurge continues in the Horn of Africa on a much-reduced scale, two hot spots currently remain. First, aerial and ground control operations continue in northeast Somalia against an increasing number of very small, but numerous hopper bands that formed during November. As some infestations will be missed and cannot be treated, a limited number of new small immature swarms will form from the second week of December onwards. As vegetation dries out, the swarms will migrate south to southern Ethiopia and southern Somalia where they could start to appear in northeast Kenya in mid-December and spread west across the northern counties. The scale of any swarm migration from northeast Somalia is likely to be limited, depending on the success of current survey and control operations. Second, a few small spring-bred mature swarms from northeast Somalia arrived in northeast Kenya during the first week of November and then moved back into southern Ethiopia where control operations are in progress. These swarms are likely to lay eggs that will hatch, and small hopper bands could form along the Ethiopia/Kenya border in December. Elsewhere, hopper groups were treated on the southern coast of Eritrea that developed from a few swarms that arrived from northern Ethiopia and laid eggs in October. Remaining summer infestations were treated in northern Sudan. Small-scale breeding occurred on the southern coast of Yemen. Low numbers of adults began to appear in winter breeding areas along the Red Sea where upcoming breeding may be limited by poor rains. The situation remains calm in other regions.

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.

Telephone: +39 06 570 52420 (7 days/week, 24 hr)

E-mail: eclo@fao.org / faodlislocust@gmail.com

Internet: www.fao.org/ag/locusts

Facebook/Twitter: [faolocust](https://www.facebook.com/faolocust)



Weather & Ecological Conditions in November 2021

Dry conditions in the Horn of Africa limited breeding. Breeding conditions improving along both sides of the Red Sea.

WESTERN REGION

In the Sahel of West Africa, very little rain fell during November except for some possible light showers in northwest Mauritania during the first decade. Consequently, ecological conditions were mainly dry except for annual vegetation that was becoming green in the Adrar Settouf area of the Western Sahara near the Mauritania border. Elsewhere, green vegetation persisted in a few limited areas of northern Mali (Adrar des Iforas), Niger (Air Mountains), and in northeast Chad. In Northwest Africa, green vegetation was present in a few places of central and southern Algeria, mainly near irrigated perimeters in the Adrar Valley and further south along the Niger border. Elsewhere, dry conditions prevailed.

CENTRAL REGION

In the Horn of Africa, seasonal winds were mainly from the south but, as the month progressed, these winds retreated southwards and were replaced by northeasterly winds. By the end of the month, the northeasterly winds reached as far south as the Shebelle River in eastern Ethiopia. In early November, there were a few consecutive days of strong northeasterly winds that reached as far south as northeast Kenya. Very little rain fell in the region except for light showers during the first decade in southern Ethiopia south of Arba Minch. During the last decade, good rains fell in the extreme southeast of Ethiopia on the Kenya border as well as in some adjacent areas of northern Mandera and Wajir counties in northern Kenya, and in southern Somalia. On 24–25 November, a tropical depression brought rainfall to the extreme tip of northeast Somalia, mainly in the hills north of Iskushuban with lighter showers east and north of Gardo to Bosaso. Consequently, breeding conditions were only favourable in northeast Somalia where green vegetation was present and were less favourable in the Somali region of eastern Ethiopia where mainly dry conditions prevailed due to poor rainfall. Breeding conditions were improving in southern Ethiopia and adjacent areas of northern Kenya. In the winter breeding areas along both sides of the Red Sea, rain began to fall in areas that were previously dry. During the first decade, light rain fell at times on the Red Sea coast of Eritrea. During the second decade, good rains fell over the northern Red Sea from Port Sudan to Marsa Alam in southeast Egypt and from Jeddah, Saudi Arabia to the Gulf of Aqaba. During the third decade, there was a complete absence of rain. Consequently, breeding conditions are likely to be improving in those areas of recent rainfall as

well as on the Red Sea coast of Yemen from October rains. Along both sides of the Gulf of Aden, vegetation was drying out along the southern coast of Yemen and dry conditions persisted in northwest Somalia.

EASTERN REGION

Dry conditions prevailed and no significant rain fell in the region during November except for possible light showers at times in coastal areas of southeast Iran near Jask and Bandar Abbas. Consequently, conditions were not favourable for breeding.



Area Treated

Control operations increased substantially in November, treating 38 483 ha compared to 7 970 ha in October.

| | |
|----------|-----------|
| Egypt | 100 ha |
| Eritrea | 97 ha |
| Ethiopia | 2 126 ha |
| Somalia | 18 405 ha |
| Sudan | 17 735 ha |



Desert Locust Situation and Forecast

WESTERN REGION

ALGERIA

• SITUATION

During November, isolated mature solitarious adults were seen at a few places in the extreme south near In Guezzam (1934N/0546E). No locusts were seen in the Adrar Valley (2753N/0017W) of the central Sahara and near Tamanrasset (2250N/0528E) in the south.

• FORECAST

No significant developments are likely.

CHAD

• SITUATION

No locusts were reported during November.

• forecast

No significant developments are likely.

LIBYA

• SITUATION

No locusts were reported during November.

• FORECAST

No significant developments are likely.

MALI

• SITUATION

During November, small-scale breeding occurred in the Adrar des Iforas south of Kidal (1827N/0125E) where scattered third and fourth instar solitary hoppers were present. Scattered immature and mature solitary adults were seen further west in Timetrine.

• FORECAST

Low numbers of locusts are likely to persist in parts of Timetrine and the Adrar des Iforas.

MAURITANIA

• SITUATION

During November, no locusts were seen in the west and northwest regions of Brakna, Inchiri, and Dakhlett Nouadhibou except for isolated mature solitary adults north of Magta Lahjar (1730N/1305W).

• FORECAST

No significant developments are likely.

MOROCCO

• SITUATION

During November, isolated immature solitary adults were seen in the extreme south of the Western Sahara near Bir Gandouz (2136N/1628W) and the Mauritania border. No locusts were seen further north to Bir Anzarane (2353N/1431W), in Wadi Sakia El Hamra, and south of the Atlas Mountains in the Draa Valley.

• FORECAST

No significant developments are likely.

NIGER

• SITUATION

During November, isolated solitary adults were maturing in the southern Air Mountains.

• FORECAST

Low numbers of adults are likely to persist in parts of the Air Mountains. No significant developments are likely.

SENEGAL

• SITUATION

No locusts were reported during November.

• FORECAST

No significant developments are likely.

TUNISIA

• SITUATION

No reports were received during November.

• FORECAST

No significant developments are likely.

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

• FORECAST

No significant developments are likely.

CENTRAL REGION

DJIBOUTI

• SITUATION

During November, no locusts were seen during surveys in the southeast near Ali Sabieh (1109N/4242E), along the coastal plains from Djibouti (113431N/430847E) to Obock (1158N/4317E), and in the northern interior near Bouyya (1223N/4422E).

• FORECAST

Small-scale breeding may occur on the coastal plains between Djibouti and the Somalia border if rains fall.

EGYPT

• SITUATION

During November, scattered immature and mature solitary and *transiens* adults appeared on the southern coastal plains of the Red Sea between the Sudan border and Shalatyn (2308N/3535E) after mid-month. During the last week, ground teams treated 100 ha of adult that were laying. No locusts were seen elsewhere on the coast or in the interior near Lake Nasser.

• FORECAST

Small-scale breeding is likely to occur on the southern coastal plains of the Red Sea between Shalatyn and Halaib but may be limited by poor rainfall that is expected.

ERITREA

• SITUATION

During November, groups of gregarious hoppers formed on the Red Sea coast to the west of Mersa Fatma (1454N/4018E) in the Buya area from egg-laying that commenced during the second week of October by at least one mature swarm that arrived from northern Ethiopia as well as another swarm seen on the 25th. By 17 November, some hoppers had reached the fourth instar. Ground teams treated 97 ha. Elsewhere, scattered immature solitary adults were present further north along the coast near Mersa Cuba (1616N/3911E).

• FORECAST

A few small adult groups could form in the Buya area from early December onwards. Small-scale breeding is likely to occur on the central and northern coastal plains that receive rainfall.

ETHIOPIA

• SITUATION

During November, a mature swarm was seen in the Somali region north of Degeh Bur (0813N/4333E) near the Somalia border on the 1st. Another mature swarm was seen south

of the Shebelle River near El Kere (0550N/4205E) as a few mature swarms from northeast Somalia continued to migrate southwards, crossing back and forth along the Kenya border to reach south of Arero (0445N/3849E) on the 6th. During the second half of the month, several small mature swarms were concentrated in southern parts of SNNP and Oromia regions between Arero, Mega (0403N/3819E), and Teltele (0504N/3723E). No locusts were seen elsewhere in the Somali region. Control operations treated 2 126 ha of which 1 926 ha were by air.

• FORECAST

Breeding is likely to occur in the south between Teltele and the Kenya border, giving rise to hatching and the formation of small hopper bands during December. This could be supplemented by immature swarms from northeast Somalia moving through the Somali region to reach the south.

KENYA

• SITUATION

During November, a small mature swarm from northeast Somalia arrived near Mandera in the northeast on the afternoon of the 1st. In the subsequent days, a few more small swarms arrived and moved west towards Moyale in the first week. Although many swarms were reported more than once and some were moving back and forth across the Ethiopia border, it is thought that there were no more than about four swarms in all. Even though they were mature, they were not quite ready to lay eggs. No further swarms were seen after the 8th. Elsewhere, no locusts were seen or reported.

• FORECAST

There remains a risk of limited breeding in the extreme north of Marsabit, Wajir, and Mandera counties along the Ethiopia border by the swarms that arrived in early November, which could give rise to small hopper bands in December. Low to moderate numbers of immature swarms from northeast Somalia are likely to appear in the northeast from mid-December onwards and spread to other northern counties towards Turkana and Isiolo.

OMAN

• SITUATION

During November, no locusts were seen in the northern interior between Adam (2223N/5731E) and Nizwa (2255N/5731E), near Buraimi (2415N/5547E), on the Musandam Peninsula, along the Batinah coast, and in the south near Thumrait (1736N/5401E).

• FORECAST

No significant developments are likely.

SAUDI ARABIA

• SITUATION

During November, no locusts were seen in the southwest interior near Najran (1729N/4408E) and the Yemen

border and along the Red Sea coastal plains from Jizan (1656N/4233E) to Qunfidah (1909N/4107E).

• FORECAST

Low numbers of locusts are likely to appear along the coastal plains from Jizan to Duba and breed on a small scale in areas of recent rains. This may be supplemented by a few swarms from adjacent areas of Yemen arriving near Jizan.

SOMALIA

• SITUATION

During November, breeding increased in the northeast (Puntland) where laying continued in the first week and substantial hatching took place until just after mid-month. Consequently, numerous small hopper bands formed and by the end of the month a few had reached fifth instar. Most of the breeding was concentrated northwest of Gardo (0930N/4905E) but other areas may also be affected. In the northwest, a mature swarm was seen near Boroma (0956N/4313E) and one near Sheikh (0956N/4511E) during the first week. Thereafter, scattered immature and mature solitary adults were present on the plateau escarpment, and northwest coast near the Ethiopia border as well as in central areas near Galkayo (0646N/4725E). Control operations treated 18 405 ha of which 2 557 ha were by air.

• FORECAST

In the northeast, fledging will commence at the beginning of December and continue for about three weeks, giving rise to an increasing number of small immature swarms from the second week onwards. While some swarms may initially persist, most are expected to move south towards central and southern Somalia, southern Ethiopia, and northeast Kenya during the second half of December. The scale of the movement is likely to be limited but will depend on current operations. In the northwest, small-scale breeding could occur on the coast if rains fall.

SOUTH SUDAN

• SITUATION

No reports received during November.

• FORECAST

There is a low to moderate risk that a few small mature swarms may appear in Eastern Equatoria from adjacent areas of southern Ethiopia in early December.

SUDAN

• SITUATION

During November, an increasing number of hopper bands and groups of hoppers, immature and mature adults formed in the Bayuda Desert south of Ed Debba (1803N/3057E) and west of Berber (1801N/3400E) as vegetation dried out. Some of these groups moved to the Atbara River where mature solitary adults were also present. Low numbers of mature solitary adults began to appear from mid-month onwards along the entire Red Sea coastal plains, including

one group of mature adults on the 25th in the north near Eit (2009N/3706E). Control operations treated 17 735 ha in the interior of which 5 600 ha were by air.

• FORECAST

Locust infestations will decline in the Bayuda Desert. Small-scale breeding will occur along much of the Red Sea coastal plains and in subcoastal areas of the northeast but may be limited by poor rainfall that is expected. Nevertheless, there remains a risk that small hopper groups could form in some areas during January.

YEMEN

• SITUATION

During November, small-scale breeding was underway on the southern coast near Ahwar where a few small hopper bands formed in northwest of Aden near Am Rija (1302N/4434E) where scattered solitarious hoppers of all instars were present. Scattered immature and mature solitarious adults were seen between these two areas and near Mayfa'a (1416N/4735E). One group of immature adults formed near Am Rija. On the 28th, an immature swarm was seen near Bayhan (1452N/4545E). On the Red Sea coast, a mature swarm was laying eggs on the 11th near Al Zuhrah (1541N/4300E) and scattered immature and mature adults were present near Bajil (1458N/4314E) and Suq Abs (1600N/4312E).

• FORECAST

A few small groups of adults may form along the southern coast as vegetation dries out. Breeding will occur on the Red Sea coastal plains where a few hoppers bands and immature swarms could form in the north in December and January, respectively.

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

• FORECAST

No significant developments are likely.

EASTERN REGION

AFGHANISTAN

• SITUATION

No locust reports were received during November.

• FORECAST

No significant developments are likely.

INDIA

• SITUATION

During November, no locusts were seen by surveys in Rajasthan and Gujarat.

• FORECAST

No significant developments are likely.

IRAN

• SITUATION

During November, no locusts were seen or reported in coastal and interior areas of the south, and in the northeast.

• FORECAST

No significant developments are likely.

PAKISTAN

• SITUATION

During November, no locusts were seen or reported in the summer breeding areas in Nara desert and west of Karachi in the Lasbela (2614N/6619E) area.

• FORECAST

No significant developments are likely.



Announcements

Locust warning levels

A colour-coded scheme indicates the seriousness of the current Desert Locust situation: **green** for *calm*, **yellow** for *caution*, **orange** for *threat*, and **red** for *danger*. The scheme is applied to the Locust Watch web page and to the monthly bulletins. The levels indicate the perceived risk or threat of current Desert Locust infestations to crops and appropriate actions are suggested for each level.

Locust reporting

Calm (green) periods. Countries should report at least once/month and send RAMSES data with a brief interpretation.

Caution (yellow), threat (orange) and danger (red) periods. During locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent regularly every three days.

Bulletins. Affected countries are encouraged to prepare decadal and monthly bulletins summarizing 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 two days 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.

Desert Locust upsurge and response

On 17 January 2020, the Director-General of FAO activated the L3 protocols, the highest emergency level in the United Nations system, in FAO to allow fast-tracking an effective response to the upsurge in the Horn of Africa.

[\[www.fao.org/locusts\]](http://www.fao.org/locusts)

eLocust3 tools

In addition to the original eLocust3 tablet, FAO has developed three new free tools – a mobile app (eLocust3m), a GPS app (eLocust3g), and an Internet form (eLocust3w) – for improving survey and control reporting by field teams and communities. The data are critical for monitoring the situation and organizing control operations in each country, and feeds into FAO's global early warning system in near real time.

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

eLocust3mPRO

The eLocust3m mobile app now includes a PRO module to be used by well-trained locust teams for entering complete data on ecology, weather, locust, control, and safety. Teams that return to network coverage at the end of the day can use eLocust3mPRO while those teams that remain for several days in areas without coverage should continue to use the original eLocust3 tablet that sends data via satellite. The updated eLocust3m app is available for Android smartphones on the Google Play Store.

[<https://play.google.com/store/apps/details?id=plantvillage.locustsurvey&hl=en&gl=US>]

Desert Locust Standard Operating Procedures (SOPs)

A new SOP on Biology as well as an updated Ground Survey SOP, including instructions on how to use eLocust3, eLocust3g and eLocust3m, are available on Locust Watch. Amharic and Somali versions are available for Biology, Survey, and Control. The SOPs are pocket-sized and meant to be used in the field.

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

Desert Locust posters

FAO in collaboration with OCHA has developed six simple, easy to understand posters for communities that may be affected by locusts. The purpose is to provide basic messaging on pesticide containers, safety measures, pesticide exposure, farmer advice, Desert Locust, and following instructions. The posters can be edited.

[<http://www.fao.org/ag/locusts/en/publicat/2581/index.html>]

Desert Locust animation

FAO in collaboration with SWABO has produced a simple animation that explains the danger of Desert Locust.

[<https://www.youtube.com/watch?v=3TOhuA-v1m4>]

Locust Hub

FAO in partnership with ESRI operates a centralized hub for the latest Desert Locust data and progress on the emergency response to the Desert Locust upsurge.

[<https://locust-hub-hqfao.hub.arcgis.com>]

Hand-in-Hand geospatial platform

FAO has developed the Hand-in-Hand geospatial platform that also integrates Desert Locust data from the Locust Hub. [<https://data.apps.fao.org>]

Calendar

- **CRC.** 32nd session, Jeddah, Saudi Arabia (tbc)
- **DLCC.** 42nd session, Nairobi, Kenya (8–11 March 2022, tbc)
- **CLCPRO.** 10th session, Algiers, Algeria (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*. No threat to crops; maintain regular surveys and monitoring

Yellow

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

Orange

- *Threat*. Threat to crops; survey and control operations must be undertaken

Red

- *Danger*. Significant threat to crops; intensive survey and control operations must be undertaken

Regions

Western

- Locust-affected countries in West and North-West Africa: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger, Senegal, Tunisia; during 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: 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>

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>

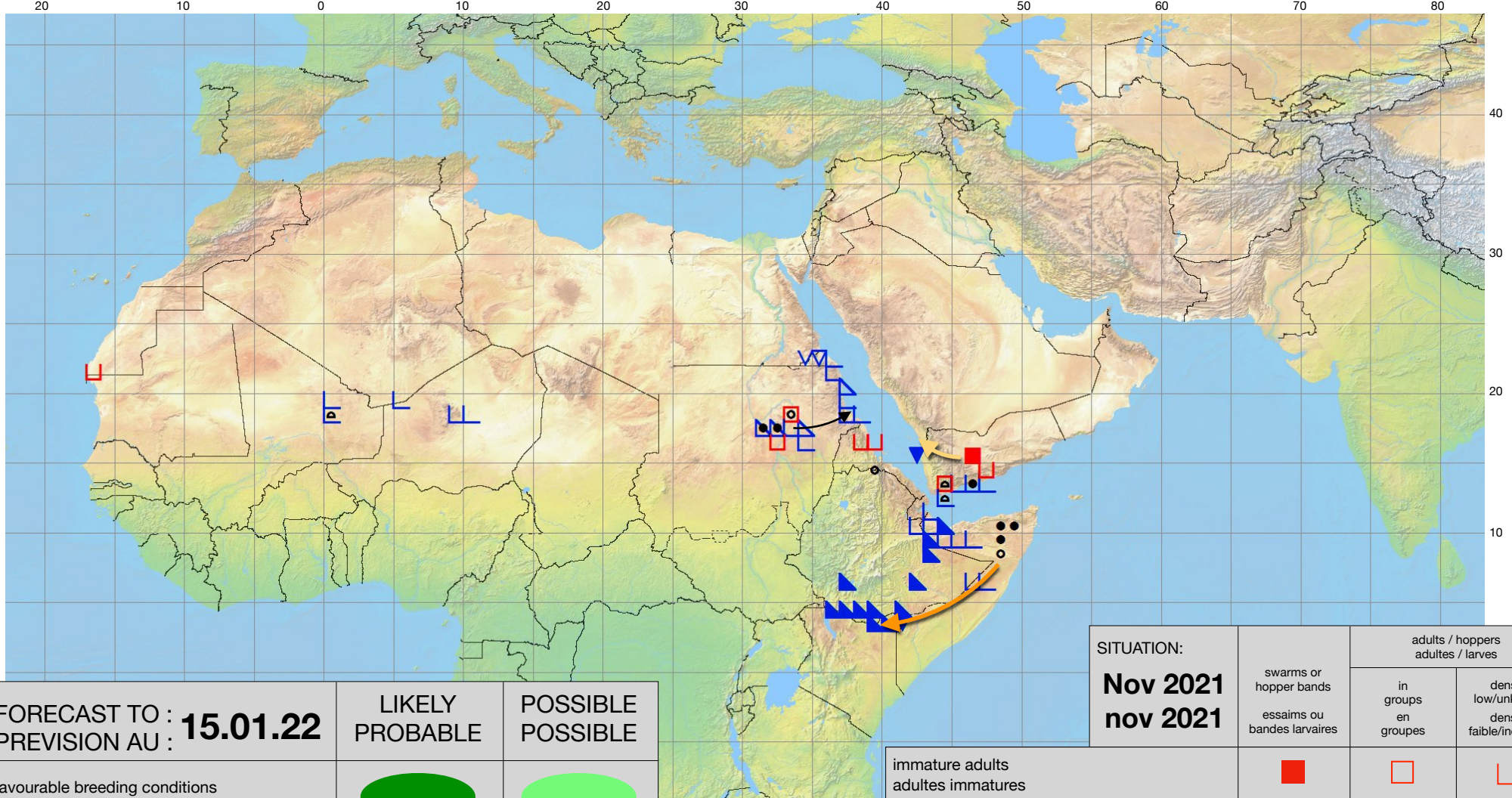
eLERT. Online database of resources and technical specifications for locust emergencies
<http://sites.google.com/site/elertsite>




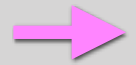


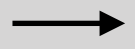





















Desert Locust Summary

Criquet pèlerin – Situation résumée

518 



| FORECAST TO : PREVISION AU : | LIKELY PROBABLE | POSSIBLE POSSIBLE |
|---|---|---|
| 15.01.22 | | |
| 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: Nov 2021 nov 2021 | swarms or hopper bands essaims ou bandes larvaires | adults / hoppers adultes / larves | |
|---|---|---|---|
| | | in groups en groupes | density low/unknown densité faible/inconnue |
| immature adults adultes immatures |  |  |  |
| mature or 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) |  |  |  |