



Desert Locust Bulletin

General situation during October 2021
Forecast until mid-December 2021

WESTERN REGION: CALM

SITUATION. Scattered hoppers and adults from local breeding in **Niger**; scattered adults in **Chad** and **Morocco**.

FORECAST. No significant developments.

CENTRAL REGION: THREAT

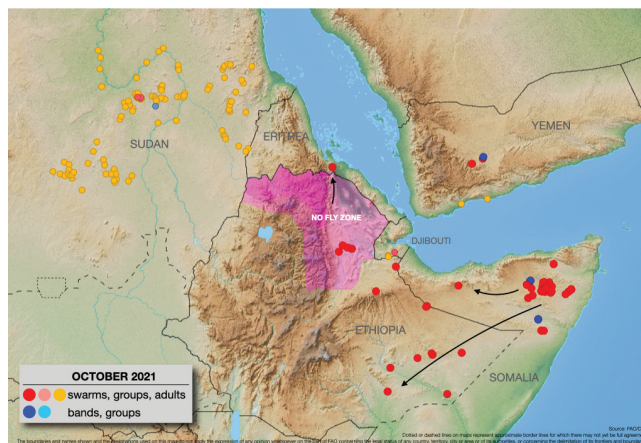
SITUATION. Smarms mature in northern **Somalia** and laying, hatching and early instar bands form in the northeast; control operations continue (7 486 ha treated); unconfirmed locusts in central Somalia. Immature swarms in northeast (Afar) and northern (Tigray, unconfirmed) **Ethiopia** but survey and control not possible due to insecurity; a few mature swarms appear in eastern Ethiopia (138 ha treated), and one moved south towards Kenya. A few small adult groups in **Djibouti**. Few hopper bands and swarms form in **Yemen** interior but operations limited by insecurity. Scattered adults in **Sudan** interior (346 ha) with a few groups of hoppers and adults. Isolated adults in **Egypt**.

FORECAST. Swarm breeding in northern **Somalia** plateau, northwest coast, and eastern **Ethiopia** will cause hatching and band formation; risk of a few current swarms migrating south to **Kenya** border where breeding could occur. Breeding also possible in central Somalia. New swarms start to form in northeast Somalia in mid-December. A few current swarms from northern Ethiopia will migrate to the **Eritrea** Red Sea coast and breed. A few swarms from **Yemen** interior to migrate to Red Sea coast of Yemen and perhaps southwest **Saudi Arabia** and breed. Scattered adults from **Sudan** interior move to Red Sea coast and breed.

EASTERN REGION: CALM

SITUATION. No locusts present.

FORECAST. No significant developments.



Swarms mature and lay eggs in NE Somalia

The current upsurge continues in the Horn of Africa and Yemen but on a much smaller scale than one year ago. As anticipated, the few spring-bred swarms remaining in northeast Somalia matured and laid eggs that hatched and new hopper bands started forming. A few of these swarms moved to northwest Somalia and eastern Ethiopia with at least one small swarm nearly reaching the Kenya border on usually strong and persistent northerly winds at the end of the month. More hopper bands are expected to form in northern Somalia and extend to eastern Ethiopia and perhaps central Somalia. A few small mature swarms could reach northern Kenya in the coming weeks and breed. Depending on rainfall and the success of survey and control operations, new immature swarms could start to form by mid-December that may eventually threaten Kenya. Control operations against immature swarms reported in northeast and northern Ethiopia were not possible due to insecurity. One mature swarm from this area reached the Eritrea coast at the end of the month where breeding will occur. Insecurity limited operations in the interior of Yemen where a few small hopper bands and swarms were present. A few swarms are likely to migrate to the Red Sea coast for winter breeding. A few small groups of hoppers and adults formed in the interior of Sudan as summer breeding came to an end and vegetation was drying out. Remaining adults will move to the Red Sea coast for small-scale winter breeding. The situation remained calm in the other regions where only scattered adults were present in Niger and Chad from summer breeding.

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

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Weather & Ecological Conditions in October 2021

Conditions became favourable for limited breeding in the Horn of Africa. Cyclone Shaheen brought heavy rains but little impact on Desert Locust.

WESTERN REGION

In the Sahel of West Africa, the position of the Inter-Tropical Convergence Zone (ITCZ) was some 200 km further south than normal and continued its seasonal retreat southwards during October. By mid-month, the ITCZ was well south of the breeding area in the northern Sahel. Consequently, very little rain fell between Mauritania and Chad except for light showers in central Chad during the second decade. Even though little rain fell, vegetation remained green on the Tamesna Plains and in parts of southeast Air Mountains in northern Niger and in central and northeastern areas of Chad. By the end of the month, vegetation was starting to dry out in these areas. In northwest Mauritania, light showers may have fallen during the last decade in northern Inchiri and adjacent areas of the Adrar Settouf region in the southern Western Sahara in Morocco. In northwest Africa, dry conditions prevailed except for limited green vegetation near irrigated perimeters in the Adrar Valley in the central Sahara of Algeria.

CENTRAL REGION

In the Horn of Africa, light rains fell in the Afar and Tigray regions of northeast and northern Ethiopia and in some coastal and plateau areas of northern Somalia during the first decade of October but declined thereafter, and very little rain fell during the rest of the month. Annual vegetation became green from these and earlier rains mainly on the plateau in northern Somalia between Burao, Erigavo, Gardo, Garowe and Las Anod, and to the south of this area in the eastern portion of the Somali region in Ethiopia from north of Kebri Dehar to the Somalia border. Soil moisture was sufficient for egg-laying in most of these areas. In central and southern Somalia, vegetation also became green mainly between the Shebelle and Juba rivers. Light rains fell in some of these areas during the second half of the month. No significant rain fell in southern Ethiopia. In Sudan, the Inter-Tropical Convergence Zone (ITCZ) continued its seasonal retreated southwards and was at least 150 km further south than usual. After mid-month, it was located south of El Obeid and well outside of the summer breeding areas of Sudan and western Eritrea. Consequently, no significant rain fell in both countries, but vegetation remained green in most areas during the first half of the month. Thereafter, it began to dry out. In the winter breeding areas along the Red Sea, dry conditions prevailed along the coastal plains from Djibouti to Egypt; however, light rain fell at times early in the month between Assab and

Mersa Fatma in Eritrea and towards the end of the month in the Tokar Delta of Sudan. More rain fell on the eastern side of the Red Sea, especially on the coast of Yemen and adjacent areas near Jizan, Saudi Arabia, during the first decade of October. This should allow breeding conditions to become favourable. Elsewhere in Yemen, heavy rains caused flooding on the southern coast at Mukalla on the 1st and light rains fell at times in the interior during the first decade. Consequently, vegetation remained green, and conditions were favourable for breeding in the interior. In Oman, cyclone Shaheen with maximum winds of 150 km/h made landfall on the northern coast on 3 October, causing heavy rains and flooding with nearly 400 mm of rain falling in some areas. It rapidly weakened as it moved inland after the 4th.

EASTERN REGION

Although the monsoon withdrew from the summer breeding areas along the Indo-Pakistan border and no significant rain fell, vegetation remained green. By the end of the month, vegetation was starting to dry out. Heavy rains and local flooding associated with Cyclone Shaheen occurred along the coastal plains in southwest Pakistan and southeast Iran from Karachi, Pakistan to Jask, Iran on 1–3 October. The cyclone moved west across the northern Arabian Sea from India to northern Oman. The impact on Desert Locust is expected to be very minimal due to the absence of any locusts.



Area Treated

Control operations declined substantially in October, treating 7 970 ha compared to 15 526 ha in September.

Ethiopia	138 ha
	3 737 ha (September, revised)
Somalia	7 486 ha
Sudan	346 ha



Desert Locust Situation and Forecast

WESTERN REGION

ALGERIA

• SITUATION

During October, no locusts were seen in the Adrar Valley (2753N/0017W) of the central Sahara and further south in the southern Sahara near Tamanrasset (2250N/0528E).

• FORECAST

No significant developments are likely.

CHAD

• SITUATION

During October, mainly isolated mature solitary adults were present in the west near Ziguey (1443N/1547E) in Kanem, in central areas east of Salal (1448N/1712E), in the east near Arada (1501N/2040E), and in the northeast between Kalait (1550N/2054E) and Fada (1714N/2132E). Locust numbers declined as the month progressed.

• FORECAST

Locust numbers will decline and only a few isolated adults are likely to remain in some areas of the central and northern Sahel. No significant developments are likely.

LIBYA

• SITUATION

No locusts were reported during October.

• FORECAST

No significant developments are likely.

MALI

• SITUATION

No reports were received during October.

• FORECAST

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

MAURITANIA

• SITUATION

During October, no locusts were seen in the west and northwest regions of Brakna, Trarza, Inchiri, and Dakhlett Nouadhibou.

• FORECAST

Isolated locusts may be present and could persist in areas of recent rainfall in Inchiri.

MOROCCO

• SITUATION

During October, isolated mature solitary adults were seen at one place in the Western Sahara near Haoza (2707N/1112W) in Wadi Sakia El Hamra. No locusts were seen further south between Bir Anzarane (2353N/1431W) and Laayoune (2709N/1311W).

• FORECAST

No significant developments are likely.

NIGER

• SITUATION

During October, isolated solitary hoppers were present on the Tamesna Plains near In Abangharit (1754N/0559E) and in the southeast Air Mountains from small-scale breeding in September. Mostly isolated immature and mature solitary adults were seen on the plains between In Gall (1651N/0701E) and the Algeria border near Assamakka (1920N/0546E), and along the south and southeast edges of the Air Mountains.

• FORECAST

Locust numbers will decline on the Tamesna Plains and 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 October.

• FORECAST

No significant developments are likely.

TUNISIA

• SITUATION

No locusts were reported during October.

• 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 October, a few scattered immature and mature solitary adults were present in the south to the southwest of Ali Sabieh (1109N/4242E) near the Ethiopian border. A group of immature adults was seen near Ali Sabieh on the 19th. No locusts were seen elsewhere in the east and on the Obock (1158N/4317E) coast in the north.

• FORECAST

There may be limited cross-border movements by a few small swarms from adjacent areas of Ethiopia and northwest Somalia in early November. While most of the swarms should transit through the country, a few could remain in any sandy areas that receive rainfall and breed.

EGYPT

• SITUATION

During October, isolated immature solitary adults persisted in the Lake Nasser area near Tushka (2247N/3126E). No locusts were seen on the Red Sea coast in the southeast near Shalatyn (2308N/3535E).

• FORECAST

Low numbers of isolated adults may appear on the Red Sea coast in the southeast by the end of the forecast period and breed on a small scale in any areas that receive rainfall.

ERITREA

• SITUATION

During the first week of October, no locusts were seen in the southern part of the western lowlands near Teseney (1506N/3639E) and the Sudan border. At the end of the

month, a very small mature swarm arrived from the south onto the Red Sea coastal plains in the Buya area to the west of Mersa Fatma (1454N/4018E).

• **FORECAST**

There is a moderate to high risk that small immature swarms will appear in the highlands from northern Ethiopia during November and move to the Red Sea coast for maturation and egg-laying.

ETHIOPIA

• **SITUATION**

During October, there were a few reports of summer-bred immature swarms in Afar region between Chifra (1136N/4001E) and Semera (1148N/4100E) on the 1-2nd. No further swarms were seen during the next two weeks as surveys were mainly confined to roads and most areas could not be accessed due to insecurity. Surveys ceased after mid-month. The situation remained equally unclear in Tigray and Amhara regions where there were unconfirmed reports of locusts during the first week. In Somali region, an immature swarm was seen near Dire Dawa (0935N/4150E) on the 1st and east of Jijiga (0922N/4250E) on the Somalia border on the 5th. No other swarms were seen in the western part of the region during intensive surveys. On the 22nd, a mature swarm was first seen in eastern Somali region near Warder (0658N/4520E) that probably arrived from northeast Somalia. At the end of the month, a few small mature swarms moved further south beyond Kebri Dehar (0644N/4416E) and south of the Shebelle River near El Kere (0550N/4205E), El Migir (0518N/4245E), and on the 30th close to the Somalia border near Mustakhil (0515N/4444E) in the Shebelle River valley. Aerial control operations treated 138 ha on the 5th.

• **FORECAST**

Low numbers of immature and mature swarms from Afar and northeast Somalia are likely to appear in the Somali region, mainly southeast of Jijiga and north of the Shebelle River, where they will mature and lay eggs in areas of recent rainfall. A few swarms may continue south of the Shebelle River to southern areas near the Kenya border. Subsequent hatching and band formation are expected from about mid-November onwards. Elsewhere, a limited number of swarms are likely to transit through the northern highlands of Amhara and Tigray to Eritrea.

KENYA

• **SITUATION**

During October, surveys continued in northern and central counties, and no locusts were reported.

• **FORECAST**

In November, there is a low to moderate risk that a few small mature swarms from southeast Ethiopia could appear at times of strong northerly winds in the far north along the Ethiopian border between Mandera and Lake Turkana, and eventually breed. Otherwise, immature swarms that form

from upcoming breeding in eastern Somalia and northern Somalia are not expected to appear in Mandera, Wajir, and Marsabit until the end of December.

OMAN

• **SITUATION**

During October, no locusts were seen in the northern interior between Adam (2223N/5731E) and Nizwa (2255N/5731E), on the Musandam Peninsula, and along the Batinah coast.

• **FORECAST**

No significant developments are likely.

SAUDI ARABIA

• **SITUATION**

During October, no locusts were seen in the southwest interior near Najran (1729N/4408E) and the Yemen border and along the Red Sea coastal plains near Jizan (1656N/4233E) and Qunfidah (1909N/4107E).

• **FORECAST**

Low numbers of locusts are likely to appear along the southern coastal plains near Jizan and Qunfidah where small-scale breeding could occur in areas that receive rainfall. This may be supplemented by a few swarms arriving from adjacent areas of Yemen.

SOMALIA

• **SITUATION**

During October, a limited number of spring-bred immature swarms were present on the plateau in the northeast (Puntland) east of Gardo (0930N/4905E) during the first week. Mature swarms were present throughout the month in the Gardo area, and some were copulating to the northwest of Gardo on the 18-24th. Hatching was detected on the 28th with first instar hoppers were forming small but dense bands. A few maturing swarms were seen on the 18th further south in Nugaal region to the southeast of Garowe (0824N/4829E). In the northwest (Somaliland), no locusts were seen during extensive surveys except for a mature swarm on the Ethiopian border east of Ayasha on the 20th and northwest of Burao (0931N/4533E) on the 27th. No locusts were seen elsewhere on the plateau and coast. Control operations treated 7 486 ha of which 3 447 ha were by air. At the end of the month, there were unconfirmed reports of mature locusts in the central regions of Bakool and Hiraan near Belet Weyne (0444N/4512E) that may coincide with reports of mature swarms in adjacent areas of Ethiopia.

• **FORECAST**

Small mature swarms are likely to appear in parts of the northern plateau and further south towards Galgaduud, Hiraan, and Bakool. Breeding is expected to increase in areas of recent rainfall where hatching and an increasing number of small hopper bands will form during November. Fledging could commence in the first week of December, giving rise to new immature swarms from the second week

onwards. Breeding will also occur on the northwest coast in areas of recent rainfall that could lead to hatching and band formation from late November onwards.

SUDAN

• SITUATION

During the first three weeks of October, scattered immature and mature solitarious adults were present in North Kordofan between Hamrat Esh Sheikh (1438N/2756E), Abu Uruq (1554N/3027E), and Umm Saiyala (1426N/3112E), in the Bayuda Desert, and along the Nile Valley from Shendi (1641N/3322E) to Dongola (1910N/3027E). Solitarious hoppers and few groups of hoppers and solitarious adults persisted in the Bayuda Desert and small-scale breeding continued in a few places by groups of adults during the first half of the month. An increasing number of mature solitarious adults was seen in the east from the Nile Valley to the Red Sea Hills between Kassala (1527N/3623E) and Sinkat (1855N/3648E), and limited laying occurred in the first week. Ground teams treated 346 ha.

• FORECAST

A few more small groups of hoppers and adults are likely to form in the Bayuda Desert, but these will decline as vegetation dries out and adults move eastwards. Consequently, an increasingly number of adults will appear along the western side of the Red Sea Hills, in Wadi Oko/Diib in the northeast, and on the coastal plains between Port Sudan and Tokar Delta. Small-scale breeding will occur on the coast in areas that receive rainfall. Limited breeding could also occur west of the Red Sea Hills. There remains a low risk that a few small immature swarms from northern Ethiopia may arrive on the southern coastal plains.

YEMEN

• SITUATION

During October, very few surveys could be carried out safely in the interior. A mature swarm was reported at the beginning of the month near Bayhan (1452N/4545E), and a very small mature swarm and late instar hopper bands were present to the northeast at the end of the month. On the southern coast, scattered mature adults were present near Zinjibar (1306N/4523E) and Ahwar (1333N/4644E), and laying was reported near Ahwar on the 20th.

• FORECAST

More small swarms are expected to form from breeding in the interior and move to the Red Sea and Gulf of Aden coastal plains where they will breed, giving rise to small hopper groups and bands.

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 during October.

• FORECAST

No significant developments are likely.

INDIA

• SITUATION

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

• FORECAST

No significant developments are likely.

IRAN

• SITUATION

During October, 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 October, no locusts were seen or reported in the summer breeding areas in Tharparkar, Nara and Cholistan deserts as well as 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 faodislocust@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]

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 (14–18 November)
- **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>

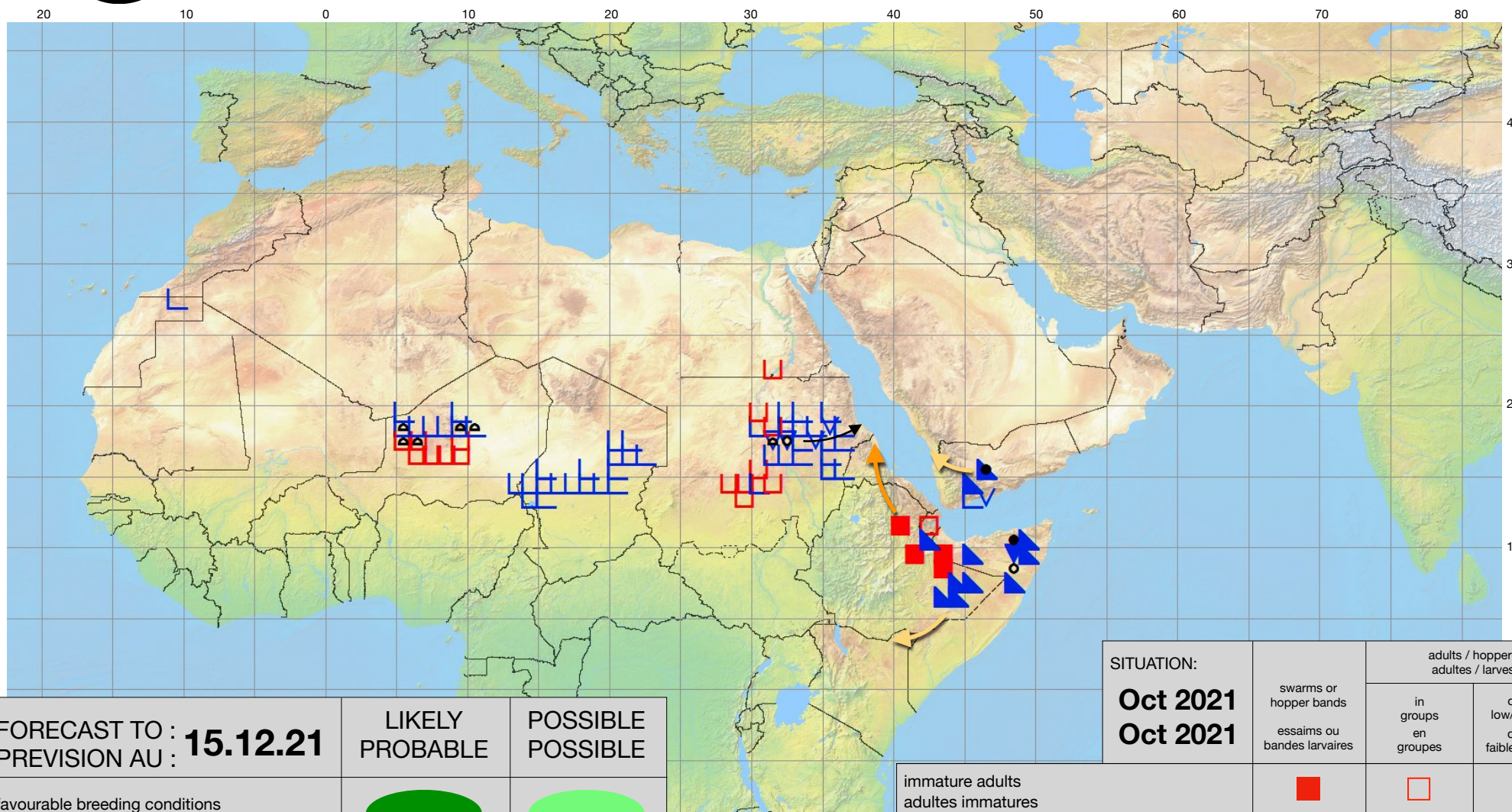
eLERT. Online database of resources and technical specifications for locust emergencies
<http://sites.google.com/site/elertsite>




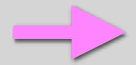





















Desert Locust Summary

Criquet pèlerin – Situation résumée

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FORECAST TO : PREVISION AU : 15.12.21	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favorables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarms(s) essaim(s) limité(s)		
non swarming adults adults non essaimant		

SITUATION: Oct 2021 Oct 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)	