

# Desert Locust Bulletin

## General situation during March 2022 Forecast until mid-May 2022

### WESTERN REGION: CALM

**SITUATION.** No locusts present.

**FORECAST.** Very small-scale breeding could occur in parts of **Morocco** and **Algeria** if more rains fall. No significant developments are likely.

### CENTRAL REGION: CALM

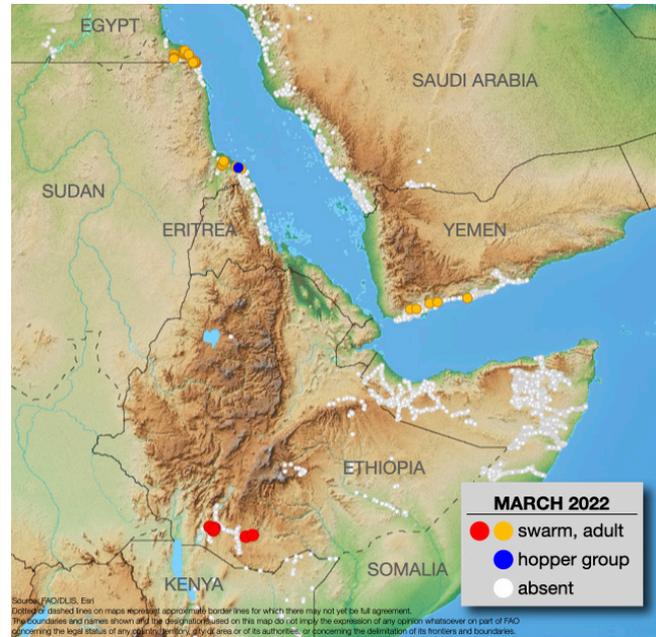
**SITUATION.** A few small remnant immature swarms in southern **Ethiopia** (400 ha treated). Scattered adults maturing in a few places on the Red Sea coast of **Egypt** and **Sudan** where breeding ended. Isolated adults in a few places on the Gulf of Aden coast in southern **Yemen**. No locusts reported elsewhere in the region.

**FORECAST.** Any remnant adults in southern **Ethiopia** may move north to areas of recent rainfall in the Somali region. Locusts will decline further along the Red Sea and Gulf of Aden coasts as vegetation dries out. Low numbers of solitary adults may appear in the interior of **Saudi Arabia** and **Yemen** where breeding, if any, will be on a very small scale and limited by poor rainfall that is expected. No significant developments are likely.

### EASTERN REGION: CALM

**SITUATION.** No locusts present.

**FORECAST.** Isolated adults are likely to appear in southeast **Iran** and southwest **Pakistan** where breeding, if any, will be on a very small scale and limited by poor rainfall that is expected. No significant developments are likely.



### CALM SITUATION RETURNS

The Desert Locust situation remained calm during March as little rain fell, vegetation was dry, and very few locusts were detected by surveys. In the Horn of Africa, a few small remnant immature swarms were present in southern Ethiopia and aerial operations treated 400 ha. Any residual swarms that remain are not expected to mature and breed in the south; instead, they are more likely to move north towards the Somali region and eventually breed, but this may be limited by poor rainfall that is expected in the coming months. In any case, existing resources should be able to manage the situation. Locusts declined in winter breeding areas along the Red Sea coast in Egypt and Sudan, and a few adults were seen on the southern coast of Yemen. As very little rain is expected to fall this year in the spring breeding areas of northwest Africa, the Arabian Peninsula, and southwest Asia, no significant developments are likely between now and July. The longer-term outlook indicates an active early monsoon season along the Indo-Pakistan border and above-normal rainfall in the northern Sahel of Africa, the interior of Yemen, and northeast Ethiopia from July to September. This might eventually lead to a potential increase in locust numbers in about October.

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 March 2022

Very little rain fell during March causing a continuation of dry conditions in all areas except in parts of the spring breeding areas in southwest Asia.

### WESTERN REGION

No significant rain fell, and dry conditions prevailed throughout the region during March. Overall, conditions remained unfavourable for breeding.

### CENTRAL REGION

Similar to February, no significant rain fell in the Horn of Africa as well as in the winter breeding areas along both sides of the Red Sea and Gulf of Aden during March. Consequently, vegetation was nearly dry in all areas along the coastal plains except for a few places where it was still green. Overall, conditions were not favourable for breeding. During the last week of March, a few light showers fell in parts of southern (Arero–Teltele) and central (Bale Robe) Oromia in southern Ethiopia, and in the eastern part of the Somali region between Degeh Bur, Kebri Dehar, and Warder. However, this is unlikely to be enough to give rise to favourable breeding conditions.

### EASTERN REGION

During the first decade of March, moderate rains fell in southwest Iran while lighter rains occurred in the Bashagard Mountains south of the Jaz Murian Basin in southeast Iran. Light rain also fell in parts of southwest Pakistan near Turbat, Panjgur, Nushki and Lasbela. In southwest Pakistan, vegetation was green along the coast from Pasni to Gwadar and in subcoastal areas of the Shooli and Turbat valleys. Vegetation was becoming green in the central and northern interior of Baluchistan, mainly the Panjgur Valley, near Khuzdar, and between Dalbandin and Nushki. Vegetation remained dry in the Lasbela and Uthal areas west of Karachi. No rain fell during the remainder of the month in the region.



## Area Treated

Ethiopia 400 ha



## Desert Locust Situation and Forecast

### WESTERN REGION

#### ALGERIA

##### • SITUATION

During March, no locusts were seen in the Adrar Valley (2753N/0017W) of the central Sahara.

##### • FORECAST

*Very small-scale and limited breeding could occur in the central Sahara if rains fall.*

#### CHAD

##### • SITUATION

No locusts were reported during March.

##### • forecast

*No significant developments are likely.*

#### LIBYA

##### • SITUATION

No locusts were reported during March.

##### • FORECAST

*No significant developments are likely.*

#### MALI

##### • SITUATION

No locusts were reported during March.

##### • FORECAST

*Low numbers of locusts may be present and could persist in parts of Timetrine and the Adrar des Iforas.*

#### MAURITANIA

##### • SITUATION

No locusts were reported during March.

##### • FORECAST

*No significant developments are likely.*

#### MOROCCO

##### • SITUATION

During March, no locusts were seen during surveys south of the Atlas Mountains southwest of Erfoud (3128N/0410W) and near Zag (2800N/0920W).

##### • FORECAST

*Very small-scale and limited breeding could occur in the Draa and Sakia El Hamra valleys as well as in the Adrar Settouf of Western Sahara if rains fall.*

#### NIGER

##### • SITUATION

No locusts were reported during March.

##### • FORECAST

*Low numbers of adults may be present and could persist in parts of the Air Mountains. No significant developments are likely.*

## SENEGAL

### • SITUATION

No locusts were reported during March.

### • FORECAST

*No significant developments are likely.*

## TUNISIA

### • SITUATION

No locusts were reported during March.

### • 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

No locust reports were received in March.

#### • FORECAST

*No significant developments are likely.*

### EGYPT

#### • SITUATION

During March, isolated solitarious adults were maturing on the Red Sea coast and in Wadi Diib between Abu Ramad (2224N/3624E) and the Sudan border. No locusts were seen further north to Shalatyn (2308N/3535E) and in the southern interior near Lake Nasser

#### • FORECAST

*Locust numbers will decline further along the Red Sea coast and no significant developments are likely.*

### ERITREA

#### • SITUATION

During March, no locusts were seen on the Red Sea coastal plains between Massawa (1537N/3928E) and the Sudan border.

#### • FORECAST

*No significant developments are likely.*

### ETHIOPIA

#### • SITUATION

During March, a small immature swarm was seen in Borena Zone of southern Oromia near Arero (0445N/3849E) on the 4<sup>th</sup> that moved west towards Yabelo (0457N/3812E), reaching Teltele (0504N/3723E) on the 17<sup>th</sup>. During the last week, there were several more reports of small immature groups and swarms near Teltele, some of which may have been the same infestation seen more than once. No locusts were seen elsewhere during surveys between Mega (0403N/3819E) and Arba Minch (0602N/3733E), near Bale Robe (0707N/4000E), and in the Somali region near Dire Dawa (0935N/4150E), Jijiga

(0922N/4250E), and along the Shebelle River. Aerial control operations treated 400 ha on the 5<sup>th</sup>.

#### • FORECAST

*A few small immature swarms may persist in parts of southern Oromia and SNNPR, but breeding is not likely. During April, a few small swarms could move north to areas of recent rainfall along the eastern escarpment and runoff areas between Bale Robe and Jijiga where they will mature but laying could be limited due to the poor rains that are expected.*

## KENYA

#### • SITUATION

No locusts were seen or reported during March.

#### • FORECAST

*No significant developments are likely.*

## OMAN

#### • SITUATION

During March, no locusts were seen in the northern interior near Adam (2223N/5731E), Nizwa (2255N/5731E), and Buraimi (2415N/5547E), on the northern coast, and the Musandam Peninsula.

#### • FORECAST

*Isolated adults may be present in a few places of the northern interior and coast where small-scale breeding is likely to be limited by the poor rains that are expected.*

## SAUDI ARABIA

#### • SITUATION

During March, no locusts were seen along the Red Sea coastal plains in the south from Jizan (1656N/4233E) to Duba (2719N/3546E). Locusts were also absent in the southwest interior along the Yemen border near Najran (1729N/4408E).

#### • FORECAST

*Isolated locusts may be present in a few places along the Red Sea coast where further breeding is unlikely. Consequently, low numbers of adults are likely to move to the interior where spring breeding will be limited because of the poor rains that are expected. No significant developments are likely.*

## SOMALIA

#### • SITUATION

During March, no locusts were seen during surveys in the northwest (Somaliland), northeast (Puntland), and in central areas near Galkayo (0646N/4725E).

#### • FORECAST

*No significant developments are likely.*

## SUDAN

#### • SITUATION

During March, locust numbers declined along the Red Sea coastal plains where only isolated mature solitarious adults were present in the Tokar Delta (1827N/3741E) and on the southern coast near Aqiq (1813N/3811E) and Adobana (1810N/3816E).

Winter breeding came to an end as the last fifth instar hopper group was reported on the 8<sup>th</sup> near Adobana.

• FORECAST

*No significant developments are likely.*

## YEMEN

• SITUATION

During March, isolated immature and mature solitary adults were present in a few places along the southern coast from west of Aden (1250N/4503E) to Ahwar (1333N/4644E). No locusts were seen elsewhere along the Gulf of Aden coast. No surveys were carried out along the Red Sea coastal plains.

• FORECAST

*Low numbers of adults may be present in a few places along the Red Sea coastal plains where further breeding is unlikely. Consequently, low numbers of adults are likely to move to the interior and breed on a small scale in areas that receive rainfall.*

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

• FORECAST

*No significant developments are likely.*

## EASTERN REGION

### AFGHANISTAN

• SITUATION

No locust reports were received in March.

• FORECAST

*No significant developments are likely.*

### INDIA

• SITUATION

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

• FORECAST

*No significant developments are likely.*

### IRAN

• SITUATION

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

• FORECAST

*Isolated adults are likely to appear in coastal areas and the Jaz Murian Basin of the southeast where spring breeding may be limited because of the poor rains that are expected.*

### PAKISTAN

• SITUATION

During March, no locusts were seen along the southwest coast in Baluchistan from Pasni (2515N/6328E) to Gwadar (2508N/6219E), in interior valleys of Turbat (2600N/6303E) and Panjgur (2658N/6406E), in northern Baluchistan between Dalbandin (2856N/6430E) and Nushki (2933N/6601E), and near Khuzdar (2749N/6639E) and Lasbela (2614N/6619E).

• FORECAST

*Isolated adults are likely to appear in coastal and subcoastal areas of Baluchistan where spring breeding may be limited because of the poor rains that are expected.*



## Announcements

### Locust warning levels

A colour-coded scheme indicates the seriousness of the current Desert Locust situation:

- **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. It indicates the alert level, perceived risk, or threat of current Desert Locust infestations to crops, and appropriate response.

### Locust reporting

**RAMSES data.** Countries should connect to the Internet and backup the RAMSES database whenever data are added or changed. There is no longer the need to send data directly to DLIS.

**Bulletins.** Affected countries are encouraged to prepare decadal, fortnightly, or monthly bulletins that summarize 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](mailto:eclo@fao.org) and [faodlislocust@gmail.com](mailto: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 regular surveys and control, developed with Plant Village (<http://tiny.cc/eL3m>)
- eLocust3g – a GPS app for emergencies, developed with Garmin (<http://tiny.cc/eLocust3g>)
- eLocust3w – an Internet form for emergencies, developed in Kobo (<http://tiny.cc/eLocust3w>)

The geo-referenced data collected by these tools feed into FAO's global early warning system and are critical for real-time monitoring and planning field operations in each country. [<http://www.fao.org/ag/locusts/en/activ/2573/eL3suite/index.html>]

### Standard Operating Procedures (SOPs)

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

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

### Community awareness

As communities have an important role to play in Desert Locust management, FAO has developed:

- Posters – six simple, easy to understand posters, providing basic messaging on pesticide containers, safety measures, pesticide exposure, farmer advice, Desert Locust, and following instructions, which can be edited (<http://www.fao.org/ag/locusts/en/publicat/2581/index.html>)
- Animation – a simple SWABO animation that explains the danger of Desert Locust (<https://www.youtube.com/watch?v=3TOhuA-v1m4>)

### Publicly available locust data

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

- FAO Locust Hub (<https://locust-hub-hqfao.hub.arcgis.com>)
- Hand-in-Hand (<https://data.apps.fao.org>)

### 2022 calendar

- **CLCPRO**. 10<sup>th</sup> session, Algiers, Algeria (22–26 May, tbc)
- **DLCC**. 42<sup>nd</sup> session, Nairobi, Kenya (postponed to October–November)
- **SWAC**. 33<sup>rd</sup> session, Tehran, Iran (13–15 December, 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 km<sup>2</sup> • band: 1–25 m<sup>2</sup>

#### Small

- swarm: 1–10 km<sup>2</sup> • band: 25–2,500 m<sup>2</sup>

#### Medium

- swarm: 10–100 km<sup>2</sup> • band: 2,500 m<sup>2</sup> – 10 ha

#### Large

- swarm: 100–500 km<sup>2</sup> • band: 10–50 ha

#### Very large

- swarm: 500+ km<sup>2</sup> • band: 50+ ha

### Rainfall

#### Light

- 1–20 mm

#### Moderate

- 21–50 mm

#### Heavy

- more than 50 mm

### Summer rains and breeding areas

- July–September/October
- Sahel of West Africa, Sudan, western Eritrea; Indo-Pakistan border

### Winter rains and breeding areas

- October–January/February
- Red Sea and Gulf of Aden coasts; northwest Mauritania, Western Sahara

### Spring rains and breeding areas

- February–June/July
- Northwest Africa, Arabian Peninsula interior, Somali plateau, Iran/Pakistan border

### Other reporting terms

#### Breeding

- The process of reproduction from copulation to fledging

#### Recession

- Period without widespread and heavy infestations by swarms

#### Remission

- Period of deep recession marked by the complete absence of gregarious populations

#### Outbreak

- A marked increase in locust numbers due to concentration, multiplication and gregarisation which, unless checked, can lead to the formation of hopper bands and swarms

#### Upsurge

- A period following a recession marked initially by a very large increase in locust numbers and contemporaneous outbreaks followed by the production of two or more successive seasons of transient-to-gregarious breeding in complimentary seasonal breeding areas in the same or neighbouring Desert Locust regions

#### Plague

- A period of one or more years of widespread and heavy infestations, the majority of which occur as bands or swarms. A major plague exists when two or more regions are affected

simultaneously

### **Decline**

- A period characterised by breeding failure and/or successful control leading to the dissociation of swarming populations and the onset of recessions; can be regional or major

## **Warning levels**

### **Green**

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

### **Yellow**

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

### **Orange**

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

### **Red**

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

## **Regions**

### **Western**

- Locust-affected countries in West and North-West Africa: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Niger, Senegal, Tunisia; during upsurges and plagues only: Benin, Burkina Faso, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, 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](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](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>

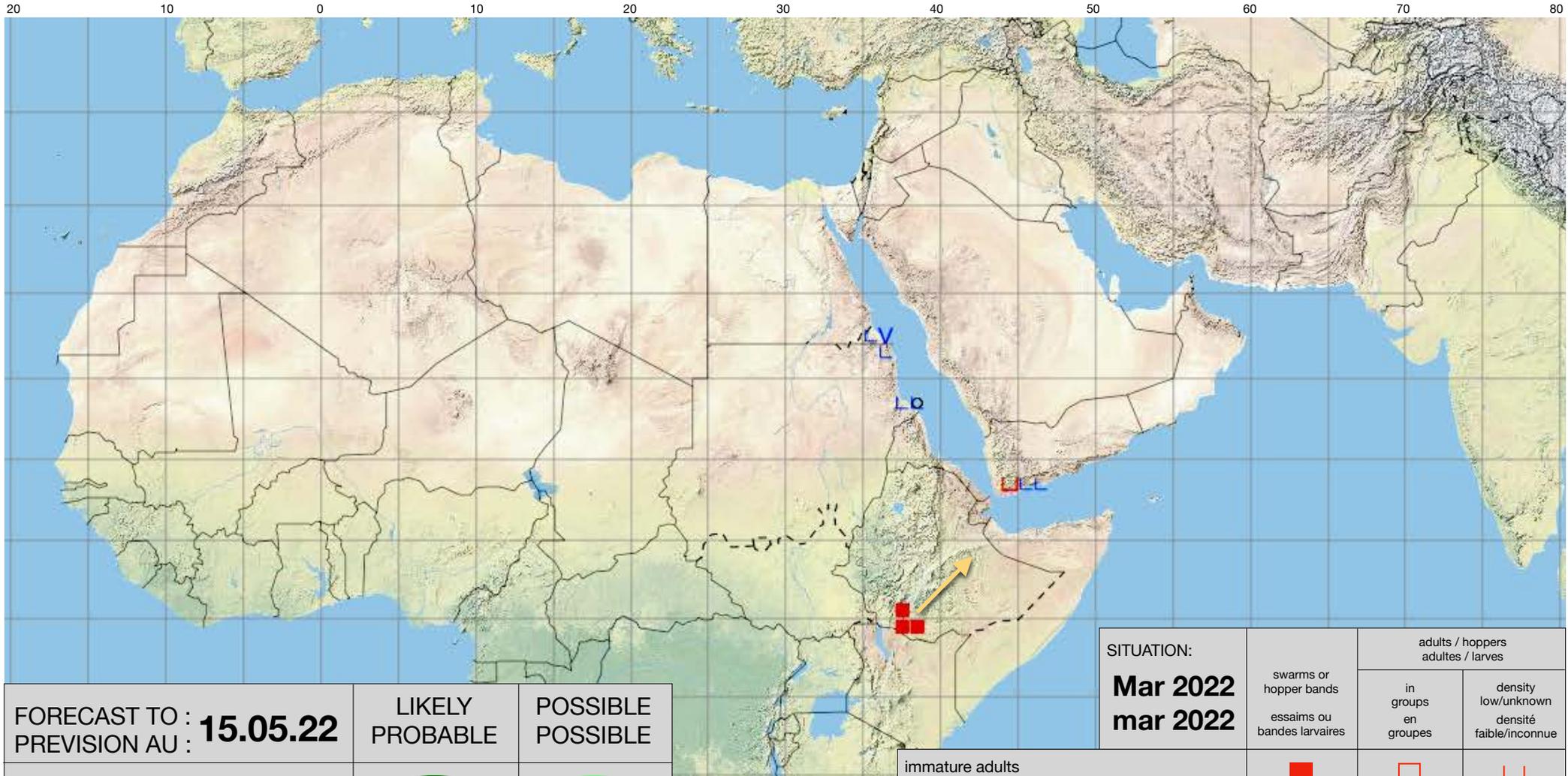
**eLERT.** Online database of resources and technical specifications for locust emergencies  
<http://sites.google.com/site/elertsite>



# Desert Locust Summary

## Criquet pèlerin – Situation résumée

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FORECAST TO : PREVISION AU :	LIKELY PROBABLE	POSSIBLE POSSIBLE
15.05.22		
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: Mar 2022 mar 2022	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)			