Food and Agriculture Organization of the United Nations

No. 520 1 FEBRUARY 2022

Desert Locust Bulletin

General situation during January 2022
Forecast until mid-March 2022

WESTERN REGION: CALM

SITUATION. Isolated adults in **Morocco**.

FORECAST. Small-scale breeding could commence in **Morocco** during March; no significant developments.

CENTRAL REGION: CAUTION

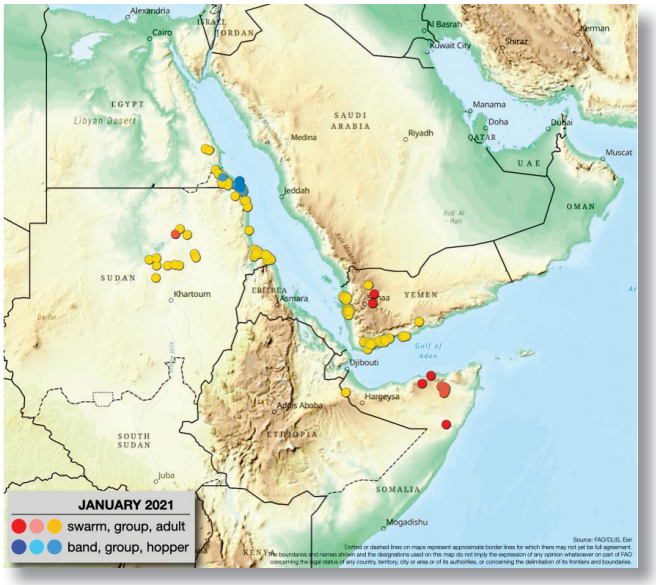
SITUATION. Control operations against small immature swarms ended in northeast **Somalia** (2 741 ha treated); no southward movement or locusts detected in **Ethiopia** and **Kenya**. Small-scale breeding on southern Red Sea coast of **Sudan** and along the Egypt/Sudan border with a few hopper groups forming in **Egypt** (480 ha); scattered adults along the Red Sea and Gulf of Aden coasts in **Yemen**.

FORECAST. Limited small-scale breeding likely in a few areas along the Red Sea coast in southeast **Egypt**, **Sudan**, northern **Eritrea**, **Saudi Arabia**, and **Yemen** as well as the Gulf of Aden coast of Yemen and northwest **Somalia**. No significant developments expected.

EASTERN REGION: CALM

SITUATION. No locusts present.

FORECAST. Isolated adults are likely to appear and breed on a small scale in southeast **Iran** and southwest **Pakistan**; no significant developments.



Upsurge declines in the Horn of Africa

After more than two years, the current Desert Locust upsurge has finally declined. Aerial control operations against the few small immature swarms that remained in northeast Somalia ended on 4 January. During the remainder of the month, no locusts were seen in Ethiopia and Kenya, and southerly migration was not detected. As ecological conditions are dry due to a lack of rainfall in the Horn of Africa, the likelihood of any further developments in the region is low but vigilance is suggested during February. Adding to the collapse of the upsurge, poor rains have limited winter breeding to a small area along both sides of the Egypt/Sudan border on the Red Sea coast. While small-scale breeding may occur during February on the coastal plains near the Sudan/Eritrea border and in a few places on the Saudi Arabia and Yemen coast, it is likely to be limited and should not cause a significant increase in locusts. Elsewhere, the situation remains calm. Small-scale breeding is likely to commence during February and March in the spring breeding areas of southeast Iran and southwest Pakistan where early rains fell in January, and south of the Atlas Mountains in Morocco where isolated adults are currently present. No significant developments are expected, and the situation should continue to remain calm and return to normal.

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

Weather & Ecological Conditions in January 2022

Good rains fell in spring breeding areas of Iran and Pakistan that may cause breeding conditions to become favourable earlier than normal. Poor rains fell in winter breeding areas along both sides of the Red Sea.

WESTERN REGION

Light rain fell during the second decade in Western Sahara where vegetation was drying out in most areas except for central parts. Vegetation was also green, and soil was moist in the Draa Valley south of the Atlas Mountains in Morocco and near irrigated perimeters in the Adrar Valley of the central Sahara in Algeria. Small patches of green vegetation were present in the southern Sahara of Algeria to the west of Tamanrasset. Elsewhere, conditions remained dry.

CENTRAL REGION

Light rains fell in northwest Saudi Arabia along the Red Sea coast and along central and southern coasts of Sudan during the first decade. Very little rain fell thereafter in the winter breeding areas along both sides of the Red Sea and Gulf of Aden. Nevertheless, ecological conditions were favourable for breeding in coastal areas of southeast Egypt and northeast Sudan as well as further south in Tokar Delta and on the southern coastal plains to the Eritrea border. Favourable conditions were limited on the eastern side of the Red Sea to only small areas on the coast north of Jeddah near Rabigh and south near Qunfidah and Jizan in Saudi Arabia and along parts of the northern Tihama near Al Zuhrah in Yemen as vegetation was drying out in many areas. Breeding conditions were somewhat better along the Gulf of Aden coast in southern Yemen where green vegetation and moist soil were present from west of Aden to Ahwar. Mainly dry conditions prevailed in northern Oman. In the Horn of Africa, no significant rain and vegetation continued to dry out.

EASTERN REGION

Successive eastward-moving depressions from late December brough light to moderate rains to southwest Iran that reached southwest Pakistan until 5 January. Rain continued during the second decade in Iran from the southwest to Jask. The rains fell in coastal areas as well as in the interior, reaching the Jaz Murian basin in southeast Iran and the Panjgur Valley in Baluchistan, Pakistan. This may cause ecological conditions to become favourable for spring breeding earlier than in most years, especially if more rains fall in the coming month. Ground surveys in Pakistan confirmed the presence of green vegetation and wet soil moisture along the coast and in the Turbat Valley of the interior.

Area Treated

Control operations declined dramatically to 3 221 ha in January compared to 27 868 ha in December. The last operations in the Horn of Africa were conducted on 5 January.

Egypt	480 ha
Somalia	2 741 ha

Desert Locust Situation and Forecast

WESTERN REGION

Algeria

• **SITUATION**

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

• **FORECAST**

No significant developments are likely.

Chad

• **SITUATION**

No locusts were reported during January.

• forecast

No significant developments are likely.

Libya

• **SITUATION**

No locusts were reported during January.

• **FORECAST**

No significant developments are likely.

Mali

• **SITUATION**

No locusts were reported during January.

• **FORECAST**

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

Mauritania

• **SITUATION**

No locusts were reported during January.

• **FORECAST**

No significant developments are likely.

Morocco

• **SITUATION**

During January, low numbers of mature solitarious adults were present in the southern portion of the Western Sahara between Aousserd (2233N/1419W) and the Mauritania border while

isolated adults were seen in the Sakia El Hamra valley near Haouza (2707N/1112W) and south of the Atlas Mountains in the Draa Valley between Foum El Hassan (2901N/0853W) and Foum Zguid (3005N/0652W). No locusts were seen elsewhere in the Western Sahara.

• **FORECAST**

As temperatures warm up and if rains fall, small-scale breeding could commence towards the end of the forecast period in the Draa and Sakia El Hamra valleys as well as in the Adrar Settouf of Western Sahara.

Niger

• **SITUATION**

No locusts were reported during January.

• **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 January.

• **FORECAST**

No significant developments are likely.

Tunisia

• **SITUATION**

No locusts were reported during January.

• **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 January, no locusts were seen during surveys in the northern interior near Tadjourah (1147N/4253E) and Obock (1158N/4317E).

• **FORECAST**

No significant developments are likely.

Egypt

• **SITUATION**

During January, small-scale breeding occurred in the southeast along the Red Sea coastal plains between Shalatyn and the Sudan border where low numbers of solitarious hoppers developed, reaching fifth instar by the end of the month when a few small hopper groups formed. Isolated mature solitarious adults were seen in the same area while a few isolated immature solitarious adults were present further north near El Sheikh El Shazly (2412N/3438E). No locusts were seen in the southern interior near Lake Nasser and in the northwest near Siwa (2912N/2531E) and Salum (3131N/2509E). Ground teams treated 480 ha.

• **FORECAST**

Low numbers of hoppers and adults are likely to persist in the southeast along the Red Sea coast but will decline as vegetation dries out.

Eritrea

• **SITUATION**

During January, no locusts were seen on the Red Sea coastal plains west of Mersa Cuba (1616N/3911E) on the 26th.

• **FORECAST**

Low numbers of locusts may be present in a few places along the northern coastal plains of the Red Sea where small-scale breeding may occur in any areas that receive rainfall.

Ethiopia

• **SITUATION**

During January, no locusts were seen during ground and aerial surveys north of the Kenya border in the southern portion of Oromia and SNNPR, including the Rift Valley to Arba Minch (0602N/3733E), and in the eastern portion of the Somali region to the north of the Shebelle River, in the highlands near Harar (0919N/4206E), and along the railway between Ayasha (1045N/4234E) and the Djibouti border.

• **FORECAST**

Low numbers of adults may be present in parts of southern Oromia and SNNPR to the north of the Kenya border. No significant developments are likely.

Kenya

• **SITUATION**

No locusts were seen or reported during January.

• **FORECAST**

Low numbers of adults may be present south of the Ethiopia border in northern Mandera, Marsabit, and northeast Turkana counties. No significant developments are likely.

Oman

• **SITUATION**

During January, no locusts were seen in the northern interior near Buraimi (2415N/5547E) and Nizwa (2255N/5731E), and on the Batinah coast.

• **FORECAST**

No significant developments are likely.

Saudi Arabia

• **SITUATION**

During January, no locusts were seen along the Red Sea coastal plains near Jizan (1656N/4233E), Qunfidah (1909N/4107E), and from Jeddah (2130N/3910E) to Masturah (2309N/3851E).

• **FORECAST**

Low numbers of locusts may be present in a few areas along the Red Sea coast where small-scale breeding may occur near Jizan, Qunfidah, and Rabigh.

Somalia

• **SITUATION**

During January, aerial control operations finished on the 4th in the northeast (Puntland) having treated 2 741 ha of small immature adult groups and swarms north of Gardo (0930N/4905E). During the first week, there were a few reports of a small immature swarm further north near Erigavo (1040N/4720E) and on the Gulf of Aden coast near Lasqoray (1109N/4811E), and further south to the east of Garowe (0824N/4829E) that were not treated. In the northwest (Somaliland), scattered adults were seen maturing at one place northwest of Boroma (0956N/4313E). No locusts were seen elsewhere during intensive surveys on the coast, escarpment, and plateau of Somaliland. No locusts were reported in central and southern Somalia.

• **FORECAST**

Small-scale breeding may occur on the northwest coast, causing a slight increase in locust numbers.

Sudan

• **SITUATION**

During January, small-scale breeding occurred on the Red Sea coast in the extreme northeast adjacent to the Egypt border where scattered solitarious hoppers and isolated mature solitarious adults were present north of Oseif (2146N/3651E). One group of third instar transiens hoppers were present on the 10th. Scattered mature solitarious adults were present further south in the Red Sea Hills north of Sufiya (2119N/3613E) and along the coast further south near Mohamed Qol (2054N/3709E), in Tokar Delta (1827N/3741E) and Khor Baraka, and on the southern coastal plains from Aqiq (1813/N3811E) to the Eritrea border. Some adults were seen copulating in the latter area at mid-month. No locusts were seen elsewhere along the coast and in subcoastal areas. In the interior during the first half of the month, scattered mature solitarious adults persisted in the Bayuda Desert from Wadi Muqaddam to Abu Hamed (1932N/3320E) and a few small groups of *transiens* immature and mature adults, including copulating, were seen near irrigated schemes.

• **FORECAST**

Small-scale breeding is likely to occur in the Tokar Delta and along the southern coastal plains, causing a slight increase in locust numbers.

Yemen

• **SITUATION**

During January, an immature swarm from earlier breeding was seen in the interior south of Al Hazm (1610N/4446E) on the 3rd and another swarm was reported on the 8th in the highlands east of Sana'a (1521N/4412E). Scattered immature and mature solitarious adults were present on the Red Sea coastal plains near Hodeidah (1450N/4258E) and Al Zuhrah (1541N/4300E) and on the Gulf of Aden coast from west of Aden (1250N/4503E) to Ahwar (1333N/4644E) and Mayfa'a (1416N/4735E).

• **FORECAST**

Small-scale breeding is likely to occur on the Red Sea and Gulf of Aden coastal plains, causing locusts to increase slightly.

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 January.

• **FORECAST**

No significant developments are likely.

India

• **SITUATION**

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

• **FORECAST**

No significant developments are likely.

Iran

• **SITUATION**

During January, 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 and breed on a small scale in coastal areas of the southeast.

Pakistan

• **SITUATION**

During January, no locusts were seen along the southwest coast in Baluchistan from Uthal (2548N/6637E) to Gwadar (2508N/6219E), and in the interior near Turbat (2600N/6303E).

• **FORECAST**

Isolated adults are likely to appear and breed on a small scale in coastal and subcoastal areas of Baluchistan.

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

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 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 tools

In addition to the original eLocust3 tablet, FAO has developed three new free tools – a smartphone 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

Desert Locust survey and control data are available for research and other non-commercial purposes and can be downloaded from the FAO Locust Hub in partnership with ESRI.
[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]

2022 calendar

- **CRC.** 32nd session, Jeddah, Saudi Arabia (27 February – 3 March, tbc)
- **CLCPRO.** 10th session, Algiers, Algeria (22–26 May, tbc)
- **DLCC.** 42nd session, Nairobi, Kenya (postponed to October–November)
- **SWAC.** 33rd 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^2
- band: 1–25 m^2

Small
- swarm: 1–10 km^2
- band: 25–2,500 m^2

Medium
- swarm: 10–100 km^2
- band: 2,500 m^2 – 10 ha

Large
- swarm: 100–500 km^2
- band: 10–50 ha

Very large
- swarm: 500+ km^2
- 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, Sierre Leone and Togo

Central
- Locust-affected countries along the Red Sea: Djibouti, Egypt, Eritrea, Ethiopia, Oman, Saudi Arabia, Somalia, Sudan, Yemen; during upsurges and plagues only: Bahrain, D.R. Congo, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Palestine, Qatar, South Sudan, Syria, Tanzania, Turkey, UAE and Uganda

Eastern

- Locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.

Useful tools and resources

FAO Locust Watch. Information, maps, activities, publications, archives, FAQs, links
http://www.fao.org/ag/locusts

FAO/ESRI Locust Hub. Desert Locust maps and data download, and emergency response progress
https://locust-hub-hqfao.hub.arcgis.com

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

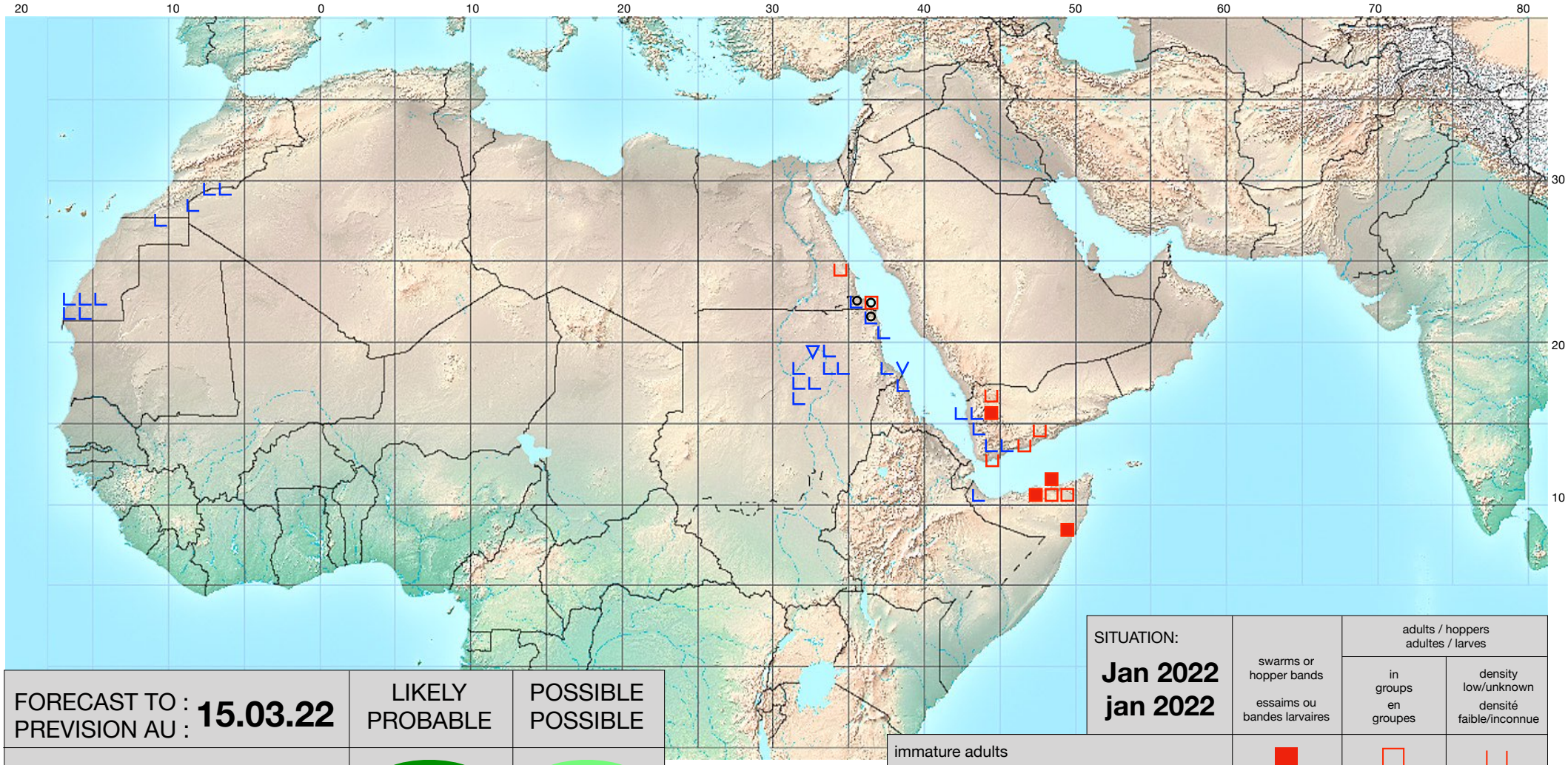
FAOLocust Facebook. Information exchange using social media
http://www.facebook.com/faolocust

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

520



FORECAST TO : PREVISION AU : **15.03.22**	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favourables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarms(s) essaim(s) limité(s)		
non swarming adults adults non essaimant		

SITUATION: **Jan 2022 jan 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)	●	○	⌓