Food and Agriculture Organization of the United Nations

No. 525 1 JULY 2022

Desert Locust Bulletin

General situation during June 2022
Forecast until mid-August 2022

WESTERN REGION: CALM

SITUATION. Low numbers of adults in the central and southern Sahara of **Algeria**.

FORECAST. Small-scale breeding will occur in the northern Sahel of **Mauritania**, **Mali**, **Niger**, and **Chad** with the onset of the summer rains. Locust numbers are expected to remain low, and no significant developments are likely.

CENTRAL REGION: CALM

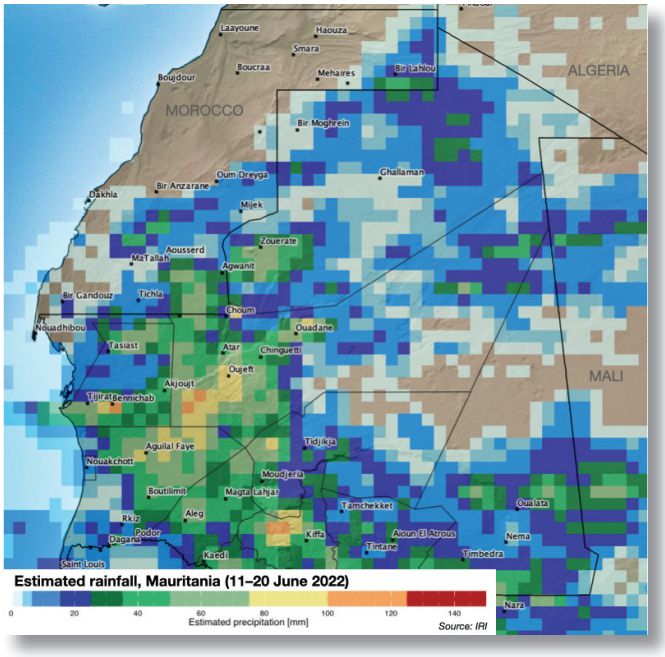
SITUATION. Low numbers of adults persist in southeast **Egypt**.

FORECAST. Small-scale breeding will occur in western **Eritrea** and the interior of **Sudan** and **Yemen** with the onset of the summer rains. Isolated breeding may occur in northeast **Ethiopia**. Locust numbers are expected to remain low in all breeding areas, and no significant developments are likely.

EASTERN REGION: CALM

SITUATION. No locusts present.

FORECAST. Small-scale summer breeding will occur along both sides of the Indo-Pakistan border with the onset of the monsoon rains. Locust numbers are expected to remain low, and no significant developments are likely.



SUMMER RAINS START IN SOME AREAS

The Desert Locust situation continued to remain calm during June. Only low numbers of solitarious adults persisted in southeast Egypt and near irrigated areas in the Sahara of Algeria. No control operations were required during the month. Due to a persistent La Niña, seasonal rains commenced earlier than normal as expected in some southern parts of the summer breeding areas in the northern Sahel between Mauritania and western Eritrea. Rains were more heavier and widespread in Mauritania. Nevertheless, vegetation remained mostly dry but was starting to become green in parts of central Niger, the interior of Sudan, and eastern Ethiopia. In response to a negative Indian Ocean Dipole, pre-monsoon rains fell in some areas along the Indo-Pakistan border that should cause annual vegetation to become green. During the forecast period, small-scale breeding will occur in the northern Sahel from Mauritania to western Eritrea and along both sides of the Indo-Pakistan border. This will cause locust numbers to increase slightly but remain well below threatening levels. Limited breeding may also occur in northeast Ethiopia and in the interior of Yemen if rains fell during the forecast period.

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 June 2022

Rains began to fall in the summer breeding areas of the northern Sahel in Africa and along the Indo-Pakistan border. Heavy rains fell from west to northern Mauritania.

WESTERN REGION

The Inter-Tropical Convergence Zone (ITCZ) continued its seasonal movement northwards in West Africa and arrived in the summer breeding areas during the second decade of June when it reached Tamchekket and Oualata in southern Mauritania, north of Gourma in central Mali, Tchin in central Niger, and Arada in eastern Chad. The ITCZ was up to 200 km further north than usual in Mauritania, central Mali and Chad but was slightly further south than normal in Niger. As a result, light rain commenced in central Mali and eastern Chad during the first decade. This was followed by widespread moderate to heavy rains in Tiris-Zemmour (Fdeirik 32 mm, Zouerate 44), Inchiri (Bennichab 124 mm), Adrar (Ouadane 93 mm), Trarza (Boutilimit 93 mm), and Tagant (Nbeika 52 mm) of north, northwest and west Mauritania. Some showers reached the southern parts of Western Sahara in Morocco. Lighter rains fell in south and southeast Mauritania, central and northern Mali, and parts of central Niger and eastern Chad. Despite these rains, annual vegetation remained mostly dry throughout the summer breeding areas in the northern Sahel; however, it was starting to become green between Tchin and Abalak in central Niger.

CENTRAL REGION

The Inter-Tropical Convergence Zone (ITCZ) continued its seasonal movement northwards over Sudan and arrived in the summer breeding areas during the second decade of June when it reached Mellit in North Darfur, some 100 km further north than usual. Its position remained normal of North Kordofan where it was located north of El Obeid. As a result, light to moderate rains fell in West and North Darfur, White Nile, and southern parts of North Kordofan in Sudan, and southern areas of the western lowlands in Eritrea. Despite these rains, annual vegetation remained dry except north of Zalingei in Darfur and between Umm Badr and Nahud in Kordofan where it was starting to become green. Localized, light showers may have occurred in the Afar region of northeast Ethiopia and near Jijiga in the Somali region. Annual vegetation remained dry in Afar but was starting to green up in small, localized areas of the Somali region between Jijiga and Degeh Bur, and near Kebri Dehar. Dry conditions prevailed in the summer breeding areas in the interior of Yemen.

EASTERN REGION

Late rains fell in the spring breeding area in eastern Baluchistan, Pakistan while pre-monsoon rains fell in the summer breeding areas of Cholistan, Pakistan and parts of Rajasthan, India. Consequently, annual vegetation was becoming green in parts of Cholistan but remained dry in most other areas.

Area Treated

No control operations were carried out during June.

Desert Locust Situation and Forecast

WESTERN REGION

Algeria

• **SITUATION**

During June, scattered immature solitarious adults, including one group, were present near irrigated perimeters in the Adrar Valley (2753N/0017W) of the central Sahara. Isolated mature solitarious adults were seen in the southern Sahara to the west of Tamanrasset (2250N/0528E).

• **FORECAST**

No significant developments are likely.

Chad

• **SITUATION**

No locusts were reported during June.

• forecast

Low numbers of solitarious adults are likely to appear in the northern Sahel and breed on a small-scale in areas that receive summer rains.

Libya

• **SITUATION**

No locusts were reported during June.

• **FORECAST**

No significant developments are likely.

Mali

• **SITUATION**

No locusts were reported during June.

• **FORECAST**

Low numbers of locusts may be present in parts of Timetrine and the Adrar des Iforas where small-scale breeding is expected in areas that receive summer rains.

Mauritania

• **SITUATION**

No locusts were reported during June.

• FORECAST

Low numbers of solitarious adults are likely to appear throughout the south and breed on a small-scale in areas of recent rains.

Morocco

• SITUATION

No surveys were carried out and no locusts were reported during June.

• FORECAST

No significant developments are likely.

Niger

• SITUATION

No locusts were reported during June.

• FORECAST

Low numbers of solitarious adults are likely to appear in central pasture areas and on the Tamesna Plains and breed on a small-scale in areas that receive summer rains.

Senegal

• SITUATION

No locusts were reported during June.

• FORECAST

No significant developments are likely.

Tunisia

• SITUATION

No locusts were reported during June.

• 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 locusts were reported during June.

• FORECAST

No significant developments are likely.

Egypt

• SITUATION

During June, scattered mature solitarious adults were present at a few places near the Red Sea coast in the southeast between Shalatyn (2308N/3535E) and Abraq (2323N/3451E). No locusts were seen on the coast between Abu Ramad (2224N/3624E) and the Sudan border, in the Nile Valley near Abu Simbel (2219N/3138E), Tushka (2247N/3126E), and north of Aswan (2405N/3256E).

• FORECAST

No significant developments are likely.

Eritrea

• SITUATION

No locusts were reported during June.

• FORECAST

Low numbers of solitarious adults are likely to appear in the western lowlands and breed on a small-scale in areas that receive summer rains.

Ethiopia

• SITUATION

During June, no locusts were seen by surveys conducted in the Somali region from Jijiga (0922N/4250E) and Degeh Bur (0813N/4333E) to eastern areas near Kebri Dehar (0644N/4416E), Warder (0658N/4520E) and the Somalia border, and south of El Kere (0550N/4205E) and Gode (0557N/4333E). Locusts were also absent in southern Oromia near Teltele (0504N/3723E).

• FORECAST

Low numbers of adults may appear in Afar where small-scale breeding could occur in areas that receive summer rains. No significant developments are likely.

Kenya

• SITUATION

No locusts were seen or reported during June.

• FORECAST

No significant developments are likely.

Oman

• SITUATION

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

• FORECAST

No significant developments are likely.

Saudi Arabia

• SITUATION

No locusts were reported during June.

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

During June, no locusts were seen by surveys on the plateau in the northwest (Somaliland) from Boroma (0956N/4313E) to Burco (0931N/4533E) and in the northeast (Puntland) between Las Anod (0828N/4721E), Garowe (0824N/4829E), Bosaso (1118N/4910E), and Iskushuban (1017N/5014E) as well as in central areas near Galkayo (0646N/4725E).

• FORECAST

No significant developments are likely.

Sudan

• SITUATION

During June, no locusts were seen in the Nile Valley between Khartoum (1533N/3235E) and Atbara (1742N/3400E).

• FORECAST

A few small groups from the northeast could arrive in the northern Nile Valley between Dongola and Shendi. Low numbers of solitarious adults are likely to appear between North Darfur and Kassala states and breed on a small-scale in areas that receive summer rains.

Yemen

• SITUATION

During June, no locusts were seen during intensive surveys in the interior from Al Hazm (1610N/4446E) to Ataq (1435N/4649E), Shabwah (1522N/4700E), Minwakh (1650N/4812E), the Hadhramaut Valley, on the plateau north of Sayun (1559N/4844E) and near Hat (1719N/5205E) and the Oman border, and along the eastern coast near Al Ghaydah (1612N/5210E).

• FORECAST

Small-scale breeding may occur in interior areas that receive summer rains.

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 June.

• FORECAST

No significant developments are likely.

India

• SITUATION

No locusts were seen by surveys in Rajasthan and Gujarat during June.

• FORECAST

Low numbers of solitarious adults may appear in parts of eastern Rajasthan and breed on a small-scale once monsoon rains commence.

Iran

• SITUATION

No locusts were seen by surveys in the southeast and northeast during June.

• FORECAST

No significant developments are likely.

Pakistan

• SITUATION

During June, no locusts were seen in the spring breeding areas along the coast in Baluchistan from Jiwani (2502N/6150E) to west of Karachi (2450N/6702E). Similarly, no locusts were seen in the summer breeding areas in Tharparkar, Nara and Cholistan deserts.

• FORECAST

Low numbers of solitarious adults may appear in parts of Tharparkar, Nara and Cholistan and breed on a small-scale once monsoon rains commence.

Announcements

Locust warning levels

A colour-coded scheme indicates the alert level, perceived risk, or threat of current Desert Locust infestations to crops, and appropriate response:

- **Green** – calm situation (low alert); no threat to crops *(maintain regular monitoring)*
- **Yellow** – cautious situation (moderate alert); potential threat to crops *(increased vigilance, control may be needed)*
- **Orange** – serious situation (high alert); threat to crops *(survey and control must be undertaken)*
- **Red** – dangerous situation (very high alert); significant threat to crops *(intensive survey and control operations must be conducted)*

The scheme is applied to the Locust Watch web page and to the monthly bulletins and updates.

Locust reporting

RAMSES data. Countries should connect to the Internet and backup the RAMSES database whenever data are added or changed; do not wait until the end of the month.

Bulletins. Affected countries are encouraged to prepare decadal, fortnightly, or monthly bulletins that summarize and analyze the situation, and share them with other countries.

Reporting. All information should be sent by e-mail to the FAO Desert Locust Information Service (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 digital tools

In addition to the original eLocust3 tablet, FAO has three free tools for data collection in the field:

- eLocust3m – a smartphone app for survey and control data, developed with PlantVillage (download: http://tiny.cc/eL3m; how-to-use videos: http://tiny.cc/eL3mVideos)

- 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, near instant analysis, 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 for all readers that clearly explains about the dangers 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)
- FAO Hand-in-Hand (https://data.apps.fao.org)

Real-time evaluation report

The full report of the *2020–2021 Desert Locust upsurge real-time evaluation* is available: http://tiny.cc/RTE2022

2022–2023 calendar

- **CLCPRO.** 10th session, Algiers, Algeria (27 November – 1 December, tbc)
- **SWAC.** Desert Locust Information Officer workshop, Tehran, Iran (5–7 December)
- **SWAC.** 33rd session, Esfahan, Iran (11–13 December)
- **DLCC.** 42nd session (March, Kenya, 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*. 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, 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

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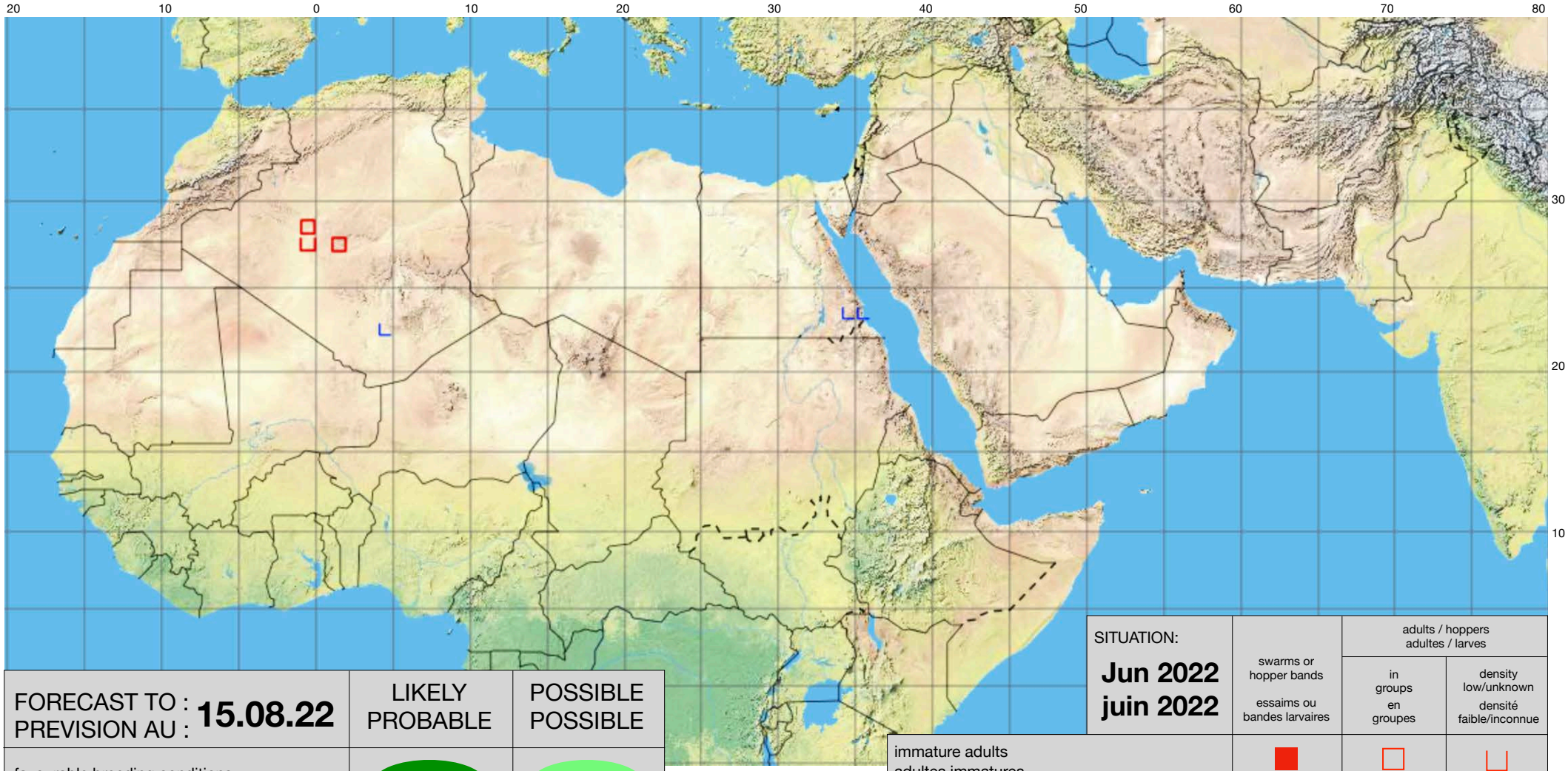

FORECAST TO : PREVISION AU : **15.08.22**	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favourables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarms(s) essaim(s) limité(s)		
non swarming adults adults non essaimant		

SITUATION: **Jun 2022 juin 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)	●	○	⌓