Food and Agriculture Organization of the United Nations

No. 528 4 OCTOBER 2022

Desert Locust Bulletin

General situation during September 2022
Forecast until mid-November 2022

WESTERN REGION: CALM

SITUATION. Low density of adults in **Mauritania** and **Niger**, hoppers in northeast Mauritania.

FORECAST. Locust numbers will decrease in the northern Sahel of **Mauritania**, **Mali**, **Niger**, and **Chad** and increase slightly in the northwest of Mauritania. Locust numbers are expected to remain low, and no significant developments are likely.

CENTRAL REGION: CALM

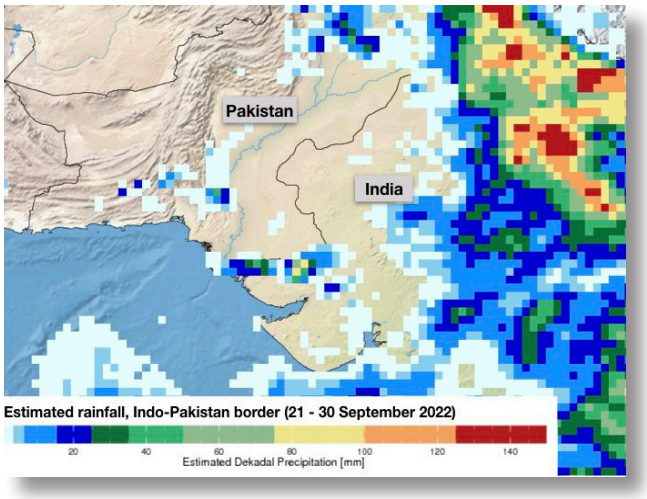
SITUATION. Low numbers of adults in Sudan, coastal and interior of **Yemen**, and one place in Western Desert of **Egypt**.

FORECAST. Low numbers in **Sudan** will decrease west of the Nile but increase slightly in the east toward the Red Sea Hills and from about mid-November start to appear in the coastal plains. In November, adults will increase slight on the Red Sea coastal plains in **Yemen** and breeding while **Saudi Arabia** be get some in centre and south Red Sea coast. 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. No significant developments are likely.



SUMMER RAINS DECLINED

The Desert Locust situation continued to remain calm during September. Only low numbers of solitarious adults persisted in Mauritania, Niger, Sudan, and Yemen. Few hoppers were seen in parts of northwest Mauritania and in the Red Sea coastal plain of Yemen. In the Western Desert of Egypt, biological control treated 20 ha of one farm that had groups of hopper and adult. Light to moderate rainfall continued in the northern Sahel but was declined during the second half of the month from Mauritania to western Eritrea, and vegetation started to dry out in many places. Similarly, the withdrawal of the southwest monsoon finish in Indo-Pakistan border during the last week of September. During the forecast, locust numbers will continue to decrease in the summer breeding areas but are likely to increase slightly in current areas of northwest Mauritania and in the Red Sea coast of Yemen and start to appear in the coastal plains in Sudan, Saudi Arabia, and maybe Eritrea and Egypt from November onwards. Consecutively, the locusts will continue to be remain well below threatening levels and no significant developments are likely.

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 September 2022

By the end of September, summer raining was declined from Mauritania to Eritrea and the southwest monsoon finished in Indo-Pakistan.

WESTERN REGION

The Inter-Tropical Convergence Zone (ITCZ) during the first two decades of September where about the same position except for the second decade where western Mauritania and Chad were somewhat south than normal while in northeast Mali and northwest Niger where north than normal. In any case, it was further north than normal from 1.6 degree (180 km) in the western and 1.5 degree (350 km) in the eastern. Light to moderate rain occurred in the northwest of Mauritania up to Zouerat during the first decade. However, by the second decade rain declined from Mauritania to Chad, and vegetation started to dry out in many places.

CENTRAL REGION

The Inter-Tropical Convergence Zone (ITCZ) during the first two decades of September where the same in Sudan. In both cases, it was further north than normal in Darfur and Kordofan by about 270 km but remained the same east of the Nile Valley. Rain increased in Darfur, Kordofan, and eastern area during the first decade, including northeast, but then decreased in the second decade in all areas. Vegetation was green in Darfur and Kordofan but starting to dry out it in the second decade. Further east, vegetation increased during the first decade from the Nile to Red Sea Hills and in western Eritrea. In the Red Sea coast of Yemen, rain was light in the first decade and a bit more in the second decade including the south Red Sea coast of Saudi Arabia. As a result, Red Sea coast vegetation became green during the first decade in Yemen and in the second decade of Saudi Arabia in the centre and southern coast. In northwest Somalia, vegetation increases on the plateau.

EASTERN REGION

Rainfall declined during the first two decades in the Indo-Pakistan area and vegetation starting to dry out after the first decade. The normal withdrawal of the southwest monsoon is usually about the third week of September in Rajasthan (17 September in Western Rajasthan and 25 September in Eastern Rajasthan). In this year, the seasonal withdrawal was delayed by one week.

Area Treated

Control operations were carried out during September:

Egypt	20 ha

Desert Locust Situation and Forecast

WESTERN REGION

Algeria

• **SITUATION**

No locusts were reported during September.

• **FORECAST**

No significant developments are likely.

Chad

• **SITUATION**

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

• **FORECAST**

Isolated of solitarious hoppers and adults are likely to be in some areas from Kanem and Fada, but will decrease from November.

Libya

• **SITUATION**

No locusts were reported during September.

• **FORECAST**

No significant developments are likely.

Mali

• **SITUATION**

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

• **FORECAST**

Low numbers of solitarious hoppers and adults are likely to decrease in Timetrine, Adrar des Iforas, and Tamesna from November.

Mauritania

• **SITUATION**

During September, isolated immature and mature solitarious adult were present in a few areas if the south from Aioun El Atrous (1639N/0936W) to Magta Lahjar (1730N/1305W) while copulating was present south of Tidjikja (1833N/1126W) at one site. In the northwest, scattered adults increased in Inchiri and southwest Adrar from Bennichab (1928N/1525W) to Atar (2032N/1308W) and scattered hopper of all instars were seen from Akjoujt (1945N/1421W) to Oujeft (2003N/1301W).

• **FORECAST**

Low numbers of solitarious hoppers and adults will decrease in the south during October but will increase slightly in the northwest near Inchiri and southwest Adrar.

Morocco

• **SITUATION**

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

• **FORECAST**

No significant developments are likely.

Niger

• **SITUATION**

During September, isolated mature solitarious adult were present in Tamesna from In Abangharit (1754N/0559E) to Arlit (1843N/0721E). Adults were breeding in at least one place near In Abangharit.

• **FORECAST**

Low numbers of solitarious hoppers and adults are likely to decrease in Tamesna from November.

Senegal

• **SITUATION**

No locusts were reported during September.

• **FORECAST**

No significant developments are likely.

Tunisia

• **SITUATION**

No locusts were reported during September.

• **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 September.

• **FORECAST**

No significant developments are likely.

Egypt

• **SITUATION**

In September, locusts were present in the Western Desert near Abu Mingar (2630N2740E) where second to fifth hopper groups, fledgling and adults were seen at one farm. Ground biological control treated 20 ha. No locusts were seen in nearby farms in Farafra (2710N/2818E), in Tushka (2247N/3126E) and Abu Simbel (2219N/3138E) near Lake Nasser, and in the Red Sea coastal plains from Halaib (2213N/3638E) to west and north of El Sheikh El Shazly (2412N/3438E).

• **FORECAST**

Locusts will decrease in the Western Desert and no significant developments are likely. A few locusts may start to appear in the southeast of the Red Sea coastal plains from about mid-Novembers.

Eritrea

• **SITUATION**

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

• **FORECAST**

Low numbers of solitarious hoppers and adults are likely to decrease in the western lowlands and may start to appear in the coastal plains from about mid-November.

Ethiopia

• **SITUATION**

During September, no locusts were seen from Dire Dawa (0935N/4150E) to Ayasha (1045N/4234E), near Jijiga (0922N/4250E), and in the south near Teltele (0504N/3723E).

• **FORECAST**

No significant developments are likely.

Kenya

• **SITUATION**

No locusts were reported during September.

• **FORECAST**

No significant developments are likely.

Oman

• **SITUATION**

During September, no locusts were seen by surveys on the Musandam Peninsula, the Batinah coast between Sohar (2421N/5644E) and Jamma (2333N/5733E), in the northern interior near Buraimi, near Nizwa and Adam (2223N/5731E), and in the south near Thumarit (1736N/5401E) and Maziuna (1750N/5239E).

• **FORECAST**

No significant developments are likely.

Saudi Arabia

• **SITUATION**

During September, no locusts were seen in Red Sea coast from Lith (2008N/4016E) to Jizan (1656N/4233E), interior near Al Baha (2001N/4129E), and in the southwest interior near Najran (1729N/4408E).

• **FORECAST**

A few locusts may start to appear in centre and south of the Red Sea coastal plains in Novembers.

Somalia

• SITUATION

No survey were carried out and no locusts were reported during September.

• FORECAST

No significant developments are likely.

Sudan

• SITUATION

During September, scattered immature solitarious adults were in a few places of West Darfur and Northern Kordofan, while mature adults were present in the Bayuda Desert and parts of Northern and River Nile. Mature adults increased slightly east of the Nile Valley from Kassala (1527N/3623E) to west of the Red Sea Hills.

• FORECAST

Low numbers of solitarious hoppers and adults will decrease west of the Nile during October but increase slightly in the east toward the Red Sea Hills. Numbers may start to appear in the coastal plains from about mid-November.

Yemen

• SITUATION

During September, scattered immature and mature solitarious adults were seen on the central parts of the Red Sea coast from south of Hodeidah (1450N/4258E) to Suq Abs (1600N/4312E) and in the interior near Al Hazm (1610N/4446E). Isolated fourth instar hoppers were seen on the 24 September in one place south of Suq Abs. No locusts were seen from Marib (1527N/4519E) to Ataq (1435N/4649E) and Al Abr (1608N/4714E), Hadhramaut Valley near Sayun (1559N/4844E), and south of Hat (1719N/5205E) in the interior.

• FORECAST

Low numbers of solitarious hoppers and adults will decrease in the interior but increase on the Red Sea coastal plains where breeding could start by November.

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 September.

• FORECAST

No significant developments are likely.

India

• SITUATION

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

• FORECAST

Low numbers will decrease in Rajasthan and Gujarat.

Iran

• SITUATION

No locusts were seen by surveys carried out in the southeast at Hormozgan and Sistan va Baluchistan, southwest at Khuzestan, and northeast at Khorasan during September.

• FORECAST

No significant developments are likely.

Pakistan

• SITUATION

No locusts were seen by surveys during September in Tharparkar, Nara, Cholistan, and Uthal.

• FORECAST

Low numbers will decrease in Tharparkar, Nara and Cholistan from mid-October onward.

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**. Workshop for review of the tools developed to implement the health and environment standard, Senegal, (11-14 October)
- **CLCPRO-CRC**. Interregional workshop on the applied research, Tunisia (8-11 November)
- **CLCPRO.** 10th session, Algiers, Algeria (27 November-1 December)
- **SWAC.** Desert Locust Information Officer workshop (postponement)
- **SWAC.** 33rd session (postponement)
- **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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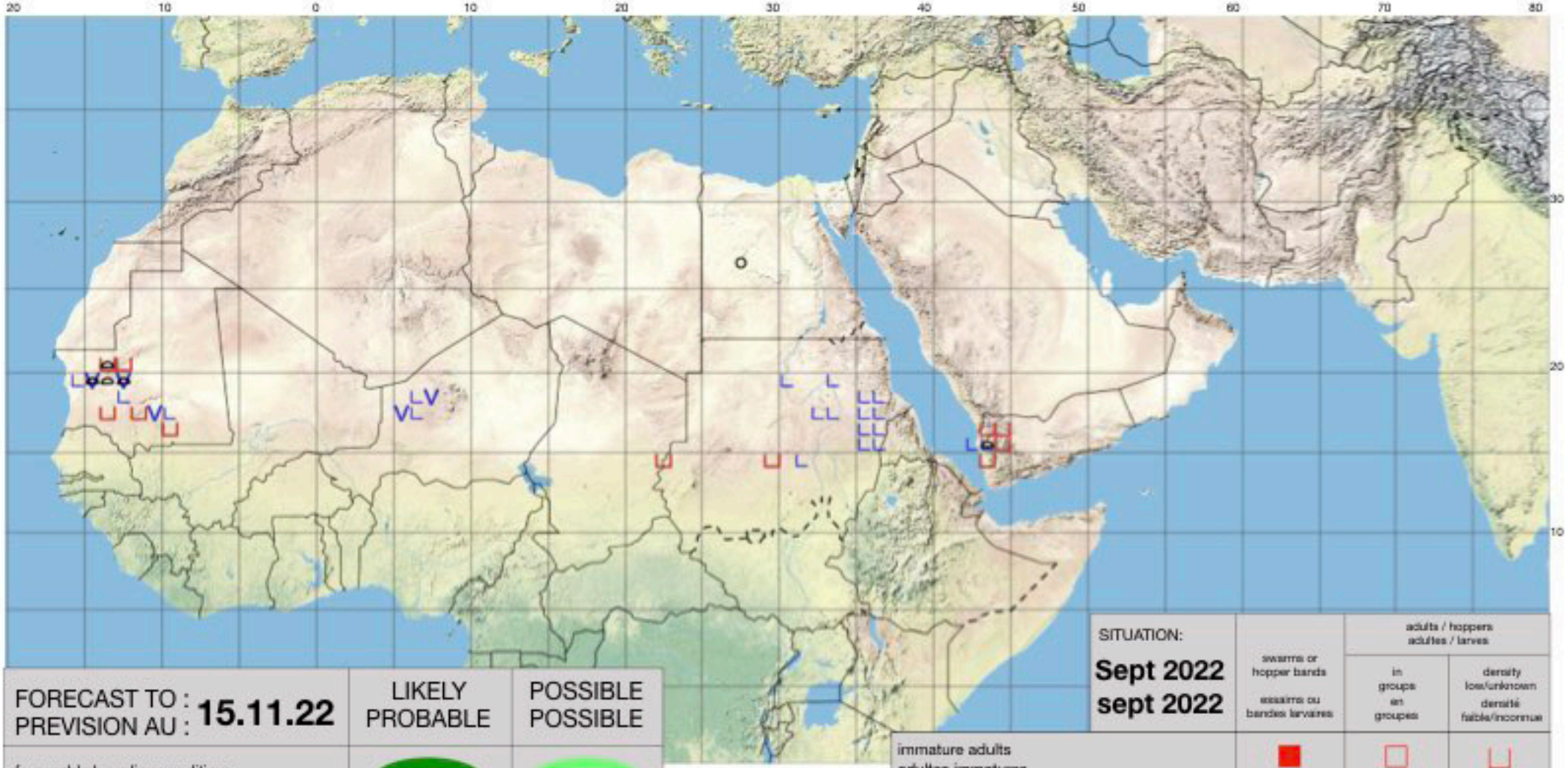

FORECAST TO : PREVISION AU : **15.11.22**	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favourables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarms(s) essaim(s) limité(s)		
non swarming adults adults non essaimant		

SITUATION: **Sept 2022** **sept 2022**	swarms or hopper bands essaims ou bandes larvaires	adults / hoppers adultes / larves: in groups en groupes	adults / hoppers adultes / larves: 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)			