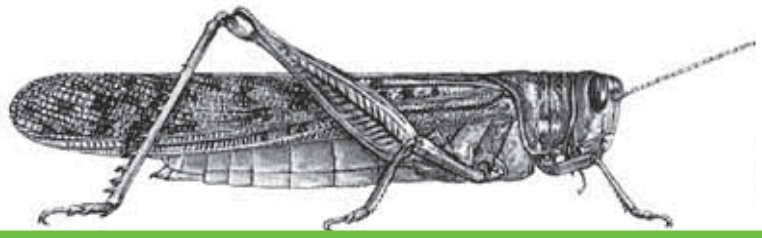

warning level: **CALM**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations **No. 470**

(4.12.2017)

General Situation during November 2017 Forecast until mid-January 2018

The Desert Locust situation continued to remain calm during November. Only low numbers of solitarious adults were present in western Mauritania, northern Niger, Algeria, Chad, and on the Red Sea coastal plains in Sudan and Yemen. Small-scale breeding occurred in northwest Mauritania, northern Niger and Chad but locust numbers remained low. During the forecast period, small-scale breeding will occur in winter breeding areas along both sides of the Red Sea, especially in Saudi Arabia where good rains fell in November. Locust numbers will decline in the northern Sahel and scattered adults are likely to persist in northern Niger and in northwest Mauritania where small-scale breeding could occur if rains fall.

Western Region. The situation remained calm during November. Low numbers of solitarious adults were present in parts of **Algeria**, western **Mauritania** and started to appear in northern Mauritania. Small-scale breeding occurred in a few places of northwest Mauritania, northern **Niger** and eastern **Chad** but locust numbers remained low. No locusts were seen during surveys in **Morocco**. During the forecast period, small-scale breeding could occur if rains fall in northwest Mauritania and Western Sahara. Locust numbers will decline in the northern Sahel while low numbers are likely to persist in parts of northern **Mali** and Niger.

Central Region. The locust situation remained calm in the region during November. Low numbers of solitarious adults were present in a few places of the winter breeding areas along the Red Sea coast in **Sudan** and **Yemen**. During the forecast period, small-scale breeding is expected along both sides of the Red Sea, especially in **Saudi Arabia** where good rains fell during November and, to a lesser extent, in Sudan, **Eritrea** and Yemen. Small-scale breeding could also occur on the northwest coastal plains of **Somalia** if rains fall.

Eastern Region. The locust situation continued to remain calm in the region during November. No locusts were reported and no significant developments are likely during the forecast period.

The FAO Desert Locust Bulletin is issued every month by the Desert Locust Information Service, AGP Division (Rome, Italy). It is supplemented by Alerts and Updates during periods of increased Desert Locust activity. All products are distributed by e-mail and are available on the Internet.
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No. 470

DESERT LOCUST BULLETIN

Weather & Ecological Conditions in November 2017

Good rains fell on the Red Sea coast in Saudi Arabia. Ecological conditions improved in some of the winter breeding areas along both sides of the Red Sea. Vegetation remained green in a few places of the northern Sahel and in Northwest Africa despite a lack of rainfall.

In the **Western Region**, no significant rain fell during November. Nevertheless, annual vegetation was green in some places at the base of the Hoggar Mountains in Algeria near Illizi, Djanet and Tamanrasset. Vegetation was also green in parts of the Adrar des Iforas in northern Mali, extending into adjacent areas of southern Algeria between Bir Bou Mokhtar and Tin Zaouatene, in northern Niger in the Air Mountains and on the northern Tamesna Plains, extending into southern Algeria, and in central and northeast Chad. In Mauritania, vegetation remained green in the west (Brakna and southwest Adrar) but was drying out in parts of Trarza and Tiris Zemmour except near Zouerate where it was green. In Morocco, vegetation was dry along the southern side of the Atlas Mountains but was becoming green in central areas of Western Sahara.

In the **Central Region**, good rains fell in the winter breeding areas along parts of the Red Sea coast of Saudi Arabia during November. During the first decade, rains fell on the coast between Qunfidah and Jizan. Heavier rains fell on the northern coast from Al Wajh to Jeddah on 19–21 November, causing floods in some places including Jeddah. Consequently, ecological conditions should improve and allow small-scale breeding. In Yemen, green vegetation persisted on the Red Sea coast but vegetation remained mostly dry on the southern coastal plains. Although little rainfall occurred, vegetation was becoming green in some places along the Red Sea coastal plains in Sudan and Eritrea but remained mostly dry in southeast Egypt.

In the **Eastern Region**, no significant rain fell in the region during November. Vegetation continued to dry out along both sides of the Indo-Pakistan border. Ecological conditions were dry and remained unfavourable for breeding along the southeastern coast of Iran.

Area Treated

No control operations were reported during November.

Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• **SITUATION**

During November, isolated immature and mature solitarious adults continued to be present in the west between Boutilimit (1732N/1441W) and Oujeft (2003N/1301W). Small-scale breeding occurred southwest of Oujeft where isolated second to fourth instar solitarious hoppers were present. During the last decade, isolated immature solitarious adults were seen further north in Tiris-Zemmour to the east of Zouerate (2244N/1221W). No locusts were present in the north towards Ghallaman (2410N/0952W) and in the southwest between Aleg (1703N/1355W) and N'Beika (1758N/1215W).

• **FORECAST**

Low numbers of adults are likely to persist in parts of Trarza, Inchiri, southwest Adrar and Tiris-Zemmour. There is a possibility for small-scale breeding if additional rainfall occurs.

Mali

• **SITUATION**

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

• **FORECAST**

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

Niger

• **SITUATION**

During the first half of November, small-scale breeding occurred on the northern Tamesna Plains between Tazerzait Plateau (1832N/0449E) and the Algerian border where isolated mid to late instar solitarious hoppers were present mixed with isolated immature solitarious adults. Isolated mature adults were scattered throughout the Air Mountains and in central pasture areas to the north of Tasker (1507N/104140E). Small-scale breeding was detected

at a few places in both areas where isolated late instar hoppers were present.

• **Forecast**

Low numbers of adults are likely to persist in the Air Mountains and, to a lesser extent, in parts of Tamesna.

Chad

• **Situation**

During November, small-scale breeding occurred in the northeast near Kalait where isolated late instar solitarious hoppers were present at a few places. Isolated immature and mature solitarious adults were scattered throughout the Sahel between Mao and Fada at densities of 100–1,100 adults/ha.

• **Forecast**

Locust numbers will decline and no significant developments are likely.

Senegal

• **Situation**

No locust activity was reported during November.

• **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.

Algeria

• **Situation**

During November, isolated mature solitarious adults were present in the Adrar Valley (2753N/0017W) of the central Sahara. In the extreme south, isolated immature adults were present near the Niger border and In Guezzam (1937N/0552E) as an extension of populations from adjacent areas in Niger. Isolated immature adults persisted near the Malian border between Bordj Badji Mokhtar (2119N/0057E) and Timeiaouine (2026N/0148E).

• **Forecast**

Scattered adults may persist in the extreme south near the Mali and Niger borders while others could remain near irrigated cropping areas in the Adrar Valley.

Morocco

• **Situation**

During November, no locusts were seen during surveys carried out south of the Atlas Mountains in the Guelmim (2859N/1003W) and Assa (2836N/0926W) areas, and in the central Western Sahara between Dakhla (2342N/1555W) and Bir Anzarane (2353N/1431W).

• **Forecast**

Low numbers of adults may appear in parts of the Western Sahara and breed on a small scale if rainfall occurs.

Libya

• **Situation**

No reports were received in November.

• **Forecast**

No significant developments are likely.

Tunisia

• **Situation**

No locust activity was reported during November.

• **Forecast**

No significant developments are likely.

CENTRAL REGION

Sudan

• **Situation**

During November, no locusts were seen during surveys carried out in the winter breeding areas along the Red Sea coast between the borders of Eritrea and Egypt and in subcoastal areas of the northeast except for isolated mature solitarious adults at one place in the northeast in Wadi Oko near Tomala (2002N/3551E) and one place on the southern coast near Adobana (1810N/3816E). No locusts were seen west of the Red Sea Hills between Derudeb (1731N/3607E) and Sinkat (1855N/3648E).

• **Forecast**

Small-scale breeding will occur in areas of recent rainfall along the Red Sea coast and in subcoastal areas of the northeast, causing locust numbers to increase slightly.

Eritrea

• **Situation**

During November, no locusts were seen during surveys carried out on the central Red Sea coastal plains from Wekiro (1548N/3918E) to nearly Mersa Cuba (1616N/3911E).

• **Forecast**

Small-scale breeding is likely to occur in areas of recent rainfall on the central and northern Red Sea coastal plains.

Ethiopia

• **Situation**

No reports were received in November.

• **Forecast**

No significant developments are likely.

Djibouti

• **Situation**

No surveys were carried out and no locusts were reported in November.

• **Forecast**

No significant developments are likely.

Somalia

• **Situation**

No reports were received in November.

• **Forecast**

Low numbers of adults may appear and breed on a small scale on the northwest coast in any areas that receive rainfall. No significant developments are likely.

Egypt

• **Situation**

During November, no locusts were seen on the Red Sea coast between Abu Ramad (2224N/3624E) and Halaib (2213N/3638E), in subcoastal areas from Shalatyn (2308N/3535E) to nearly Marsa Alam (2504N/3454E), and in the Lake Nasser area near Tushka (2247N/3126E) and Abu Simbel (2219N/3138E).

• **Forecast**

Low numbers of adults may appear and breed on the southeastern coastal plains of the Red Sea in any areas that receive rainfall. No significant developments are likely.

Saudi Arabia

• **Situation**

During November, no locusts were seen during surveys carried out on the Red Sea coast between Thuwal (2215N/3906E) and the Yemeni border.

• **Forecast**

Low numbers of adults are likely to appear in winter breeding areas on the Red Sea coast and breed on a small scale in those areas that received rainfall in November.

Yemen

• **Situation**

During November, scattered immature and mature solitarious adults were seen during surveys carried out on the Red Sea coast from north of Zabid (1410N/4318E) to south of Midi (1619N/4248E). On the southern coast, no locusts were seen from Bir Ali (1401N/4820E) to west of Aden except for isolated immature solitarious adults at one place near Lahij (1303N/4453E).

• **Forecast**

Small-scale breeding will occur in areas of recent rainfall on the Tihama, causing locust numbers to increase slightly. If more rains fall, small-scale breeding may occur along parts of the southern coast.

Oman

• **Situation**

During November, no locusts were seen during surveys carried out in a few places of the Musandam Peninsula, the Batinah coast, the northern interior south of Ibri (2314N/5630E), and between Adam (2223N/5731E) and Ibra (2243N/5831E).

• **Forecast**

No significant developments are likely.

Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Palestine, Qatar, South Sudan, Syria, Tanzania, Turkey, UAE and Uganda

• **Forecast**

No significant developments are likely.

EASTERN REGION

Iran

• **Situation**

During November, no locusts were seen during surveys carried out on the southeast coast near Jask (2540N/5746E) and Chabahar (2517N/6036E).

• **Forecast**

No significant developments are likely.

Pakistan

• **Situation**

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

• **Forecast**

No significant developments are likely.

India

• **Situation**

During November, no locusts were seen during survey carried out in Rajasthan and Gujarat.

• **Forecast**

No significant developments are likely.

Afghanistan

• **SITUATION**

No reports received.

• **FORECAST**

No significant developments are likely.

Announcements

Desert 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 bulletin's header. 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. During calm (green) periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During caution (yellow), threat (orange) and danger (red) periods, often associated with locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent at least twice/week within 48 hours of the latest survey. Affected countries are also encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to the FAO/ECLO Desert Locust Information Service (eclo@fao.org). Reports received by the first two days of the new month will be included in the FAO Desert Locust Bulletin for the current month; 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.

New information on Locust Watch. Recent additions to the web site (www.fao.org/ag/locusts) are:

- **WMO/FAO Weather and Desert Locusts booklet.** Publications – Documents
- **CRC/SWAC Desert Locust Information Officers workshop.** Publications – Reports 2017
- **SWAC Iran/Pakistan Joint Survey results.** Publications – Reports 2017

RAMSES training videos. New training videos are available on YouTube for Rv4.1 users – see Useful tools and resources section of this bulletin.

2017–2018 events. The following activities are scheduled or planned:

- **CLCPRO.** 16th EMPRES liaison officers meeting and 13th Steering Committee meeting, Agadir, Morocco (4–8 December)
- **CRC.** 10th Subregional training course on Desert Locust campaigns (December) [tbc]
- **SWAC.** Desert Locust Information Officer workshop, Tehran (15–17 January)
- **CRC/SWAC.** Desert Locust Information Officer workshop, venue tbc (5–8 May)

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 of rainfall

MODERATE

- 21–50 mm of rainfall

HEAVY

- more than 50 mm of rainfall

OTHER REPORTING TERMS

BREEDING

- the process of reproduction from copulation to fledging.

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)

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.

Useful tools and resources

FAO Locust Watch. Information, maps, activities, publications, archives, FAQs, links
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
IRI MODIS. Vegetation imagery every 16 days
http://iridl.ldeo.columbia.edu/maproom/Food_Security/Locusts/Regional/MODIS/index.html
Windy. Real time rainfall, winds and temperatures for locust migration
http://www.windy.com
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

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 plagues only: Benin, Burkino 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 plagues only: Bahrain, 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.

Desert Locust Summary
Criquet pèlerin - Situation résumée

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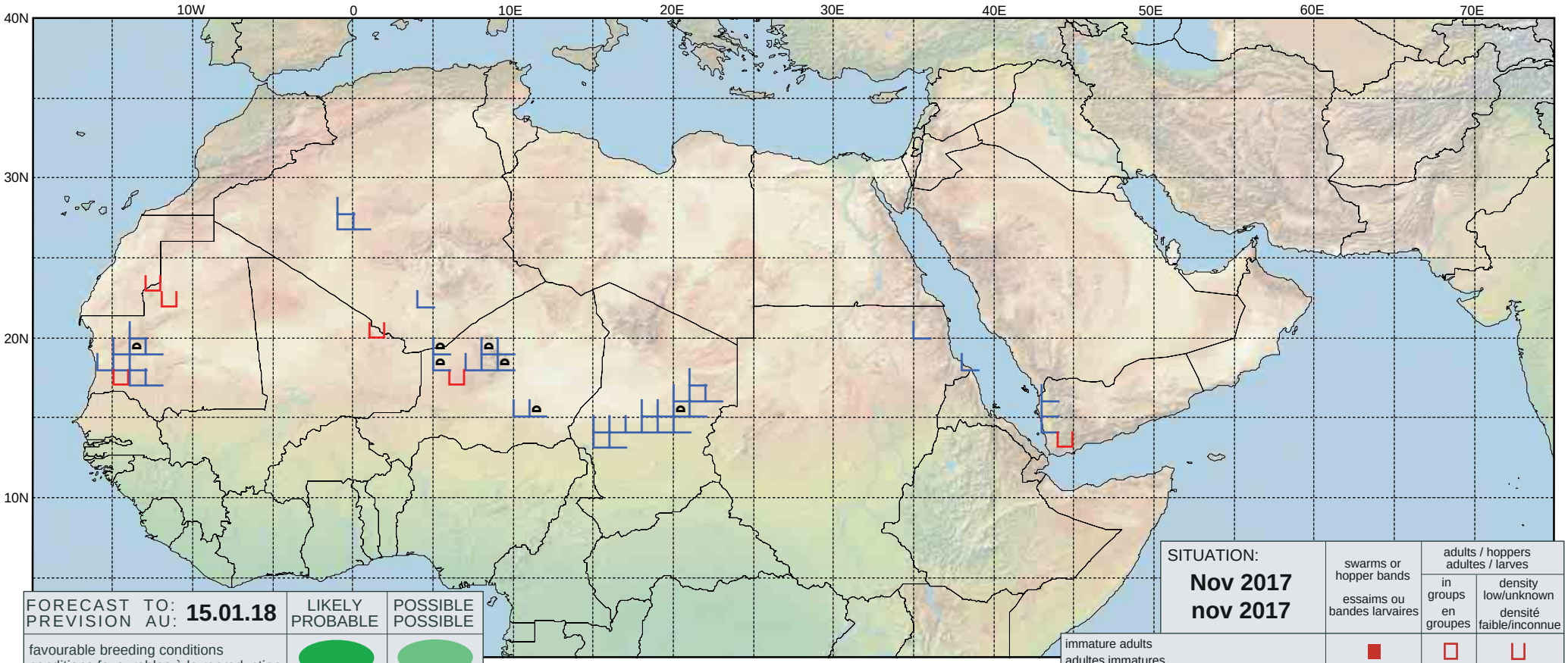

FORECAST TO: PREVISION AU: **15.01.18**	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favourables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: **Nov 2017** **nov 2017**	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 partly 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 symbol example) larves et adultes (exemple symboles combinés)			