

warning level: **CALM**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 462



**General Situation during March 2017
Forecast until mid-May 2017**

(3.4.2017)

The Desert Locust situation improved during March and became calm in all countries. Low numbers of locusts were present in a few countries and limited ground control operations were carried out in Morocco. Small-scale breeding is expected to occur during the spring in the interior of Saudi Arabia, Yemen and southeast Iran where good rains fell in March. Although this will cause locust numbers to increase slightly, they should remain below threatening levels. Spring breeding will also occur in Northwest Africa if more rain falls along the southern side of the Atlas Mountains. Regular surveys should be conducted throughout the spring to monitor the situation and prepare for the summer breeding period.

Western Region. The situation remained calm in the region during March. Limited control operations (20 ha) were carried out against high densities of adults, some of which were copulating, in the northern portion of the Western Sahara in southern Morocco. Low numbers of adults continued to mature in the central Western Sahara, and in northwest and northern Mauritania. Isolated adults were present near irrigated farms in the central Sahara of Algeria. If more rains fall, limited breeding may occur in the aforementioned areas as well as along the southern side of the Atlas Mountains in Morocco and Algeria. A few small groups could form in northern Western Sahara as vegetation dries out. No locusts were reported elsewhere in the region.

Central Region. The locust situation improved in Saudi Arabia as a result of previous control operations, and no locusts were seen in March during intensive surveys. Similarly, locust numbers declined in Sudan and Yemen where only scattered adults remained in a few places along the Red Sea coast, and scattered adults were present in southeast Egypt. Ecological conditions are expected to improve in the interior of Saudi Arabia and Yemen where widespread, good rains fell after mid-March. Consequently, one generation of breeding could occur, causing locust numbers to increase slightly in both countries. Smaller-scale breeding may also occur in coastal and interior areas of northern Oman.

Eastern Region. No locusts were reported and the situation remained calm in the region during March. However, good rains fell in coastal and interior areas of southeast Iran that are likely to allow one generation of small-scale breeding to occur during the forecast period, causing locust numbers to increase slightly.

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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Weather & Ecological Conditions in March 2017

Good rains fell in the spring breeding areas of Saudi Arabia, Yemen and Iran. Green vegetation persisted in parts of Northwest Africa. Vegetation dried out in winter breeding areas along both sides of the Red Sea.

In the **Western Region**, very little rain fell during March. In Algeria, light rain fell in the central Sahara near In Salah and Adrar while heavier rain fell further north near El Golea. Although no significant rain fell in the spring breeding areas along the southern side of the Atlas Mountains, vegetation remained green in the Draa, Ziz and Ghrib valleys of Morocco, and near Bechar and Tindouf in Algeria. Vegetation was also green near irrigated farms in the Adrar area of the central Sahara in Algeria but dry in the southern Sahara near Tamanrasset. Annual vegetation continued to dry out in the central portion of the Western Sahara but remained green further north in Wadi Sakia El Hamra. In Mauritania, green vegetation persisted in the north near Bir Moghrein and Zouerate and in southwest Adrar. In northern Mali, vegetation was green in a few wadis in the Adrar des Iforas of northern Mali and in parts of the Air Mountains as well as on the Tamesna Plains between Agadez and Teguidda in Niger.

In the **Central Region**, good rains fell in the spring breeding areas of the interior of Saudi Arabia and Yemen during March. In Saudi Arabia, the rains were mainly concentrated in the east as well as south of Riyadh to the Yemen border, including Wadi Dawasir. Less rain fell in the Gassim-Hail area. In Yemen, widespread rains fell in Ramlat Sabatyn between Marib and Wadi Hadhramaut, extending north to the Saudi Arabian border and the edge of the Empty Quarter, including the plateau between Minwakh, Thamud and Hazam. In the winter breeding areas, vegetation dried out along the coastal plains on both sides of the Red Sea, except on the northern coast of Yemen and adjacent southern areas in Saudi Arabia. Vegetation was dry on the coastal plains near Aden in southern Yemen. During the last decade, good rains fell on the southern Red Sea coast in Eritrea near Assab,

in the railway area of eastern Ethiopia and on the Somali plateau between Jijiga and the escarpment in northern Somalia. In Oman, good rains also fell in coastal (northern Batinah) and interior areas (Buraimi, Dhahera, Sharqiya) as well as on the Musandam Peninsula.

In the **Eastern Region**, good rains fell during the second half of March in spring breeding areas along the southeastern coast of Iran between Jask and Bandar Abbas, as well as inland in the Jaz Murian Basin for the second consecutive month. The rains extended further east along the coastal plains to Chabahar. Consequently, vegetation was becoming green and breeding conditions were improving. Dry conditions prevailed elsewhere in the region.



Area Treated

Morocco 20 ha (March)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During March, low numbers of mature solitarious adults persisted in the north near Bir Moghrein (2510N/1135W) and Zouerate (2244N/1221W), and in southwest Adrar between Akjoujt (1945N/1421W) and Oujeft (2003N/1301W). A few immature solitarious adults were also seen in Adrar and to a lesser extent in the northwest near Nouadhibou (2056N/1702W).

• FORECAST

Low numbers of adults are expected to persist between Zouerate and Bir Moghrein and in southwest Adrar. Small-scale breeding is likely to be in progress and will continue during the forecast period in some areas, causing a slight increase in locust numbers.

Mali

• SITUATION

No locust activity was reported during March.

• FORECAST

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

Niger

• SITUATION

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

- **FORECAST**

Low numbers of adults may be present in the Air Mountains and west of Agadez.

Chad

- **SITUATION**

No locust activity was reported during March.

- **FORECAST**

No significant developments are likely.

Senegal

- **SITUATION**

No reports received.

- **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 March, isolated mature solitary adults were present in a few places in the central Sahara near irrigated farms in the Adrar (2753N/0017W) area, and a few adults were seen copulating at mid-month. No locusts were seen in the northwest near Bechar (3135N/0217W), in the west near Tindouf (2741N/0811W) and in the southern Sahara near Tamanrasset (2250N/0528E).

- **FORECAST**

Local breeding will cause locust numbers to increase slightly near Adrar where hatching will occur early in the forecast period and fledging could start by mid-May.

Morocco

- **SITUATION**

During March, solitary adults continued to mature in the Western Sahara between Guelta Zemmur (2508N/1222W) and Oum Dreyga (2406N/1316W), and near Smara (2644N/1140W). In addition, similar infestations were detected to the north in W. Sakia El Hamra where densities reached 1,500 adults/ha during the first decade but declined after ground teams treated 20 ha. Adults were seen copulating at two places east of Haouza (2707N/1112W).

- **FORECAST**

Small-scale breeding will cause locust numbers to increase slightly in the northern Western Sahara, and adults may form a few small groups as vegetation dries out. Small-scale breeding will also occur along the southern side of the Atlas Mountains in any areas that receive rainfall.

Libya

- **SITUATION**

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

- **FORECAST**

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

Tunisia

- **SITUATION**

No locust activity was reported during March.

- **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

During March, isolated mature solitary adults persisted at three places in the Tokar Delta on the Red Sea coast and a few mature solitary adults were seen on the southern plains near Karora (1745N/3820E) and the Eritrean border.

- **FORECAST**

Scattered adults may appear in the Nile Valley between Atbara and Dongola where small-scale breeding could occur near cropping areas.

Eritrea

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

Ethiopia

- **SITUATION**

A late report indicated that no surveys were conducted and no locusts were reported in February. No reports were received in March.

- **FORECAST**

Low numbers of adults may appear along the railway area between Dire Dawa and Ayasha, and in the Somali region near Jijiga and breed on a small scale in areas of recent rainfall.

Djibouti

- **SITUATION**

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



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• **FORECAST**

No significant developments are likely.

Somalia

• **SITUATION**

During March, no locusts were seen during surveys carried out in Sanaag and Bari regions of the northeast.

• **FORECAST**

No significant developments are likely.

Egypt

• **SITUATION**

During March, scattered mature solitary adults were seen at one location near the southeast coastal plains of the Red Sea in Wadi Diib to the southwest of Abu Ramad (2224N/3624E). No locusts were seen during surveys elsewhere on the Red Sea coast between the Sudanese border and Shalaty (2308N/3535E) and near Lake Nasser in the Abu Simbel (2219N/3138E), Tushka (2247N/3126E) and Allaqi areas.

• **FORECAST**

No significant developments are likely.

Saudi Arabia

• **SITUATION**

During March, no locusts were seen during surveys carried out in winter breeding areas along nearly the entire Red Sea coastal plains between Jizan (1656N/4233E) and Al Wajh (2615N/3627E), and in spring breeding areas of the interior between Wadi Dawasir (2028N/4747E) and Hail (2731N/4141E) as well as in the east near Al Hofuf (2519N/4937E).

• **FORECAST**

Low numbers of adults may be present in parts of the interior where limited breeding could occur in areas of recent rainfall near Dawasir and perhaps in the Gassim area.

Yemen

• **SITUATION**

During March, low numbers of immature and mature solitary adults were present on the central Red Sea coastal plains near Bajil (1458N/4314E) and on the northern coast between Al Zuhrah (1541N/4300E) and Midi (1619N/4248E). On the southern coast,

immature adults were seen at one location near Lahij (1303N/4453E).

• **FORECAST**

Low numbers of adults are likely to persist on the northern coast of the Red Sea and perhaps to a lesser extent on the Aden coastal plains. Scattered adults may appear in the interior where small-scale breeding could occur in areas of recent rainfall between Marib, Ataq, Al Abr, Sayun and the plateau south of Hazar, causing locust numbers to increase.

Oman

• **SITUATION**

In March, no locusts were seen during surveys carried out on the Musandam Peninsula and in the northern interior near Buraimi (2415N/5547E).

• **FORECAST**

Low numbers of adults are likely to appear in areas of recent rainfall on the northern Batinah coast and in the interior regions of Buraimi, Dhahera and Sharqiya.

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

• **FORECAST**

No significant developments are likely.

EASTERN REGION

Iran

• **SITUATION**

During March, no locusts were seen on the southeast coastal plains near Jask (2540N/5746E) and in the Jaz Murian Basin east of Ghale Ganj (2731N/5752E).

• **FORECAST**

Small-scale breeding is expected to occur in areas of recent rainfall on the southeast coast between Minab and Chabahar, and in the Jaz Murian Basin, causing locust numbers to increase slightly.

Pakistan

• **SITUATION**

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

• **FORECAST**

Low numbers of adults are likely to appear in coastal areas of Baluchistan and breed on a small scale in areas that receive rainfall.

India

• **SITUATION**

No locusts were seen during March 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 (ecllo@fao.org). Information received by the end of the month will be included in the FAO Desert Locust Bulletin for the current month; otherwise, it 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:

- **Eritrea, Saudi Arabia, Sudan and Yemen outbreaks.** Archives – Outbreaks 2016
- **WMO/FAO Weather and Desert Locusts booklet.** Publications – Documents

2017 events. The following activities are scheduled or planned:

- **CRC/SWAC.** Desert Locust Information Officer workshop, Egypt (7–11 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 km² • band: 1 - 25 m²

SMALL

- swarm: 1 - 10 km² • band: 25 - 2,500 m²

MEDIUM

- swarm: 10 - 100 km² • band: 2,500 m² - 10 ha

LARGE

- swarm: 100 - 500 km² • band: 10 - 50 ha

VERY LARGE

- swarm: 500+ km² • 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)



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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.

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: Burkino Faso, Cape Verde, Gambia, Guinea and Guinea-Bissau.

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, Qatar, 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, 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
- **Windytv.** Real time rainfall, winds and temperatures for locust migration
<http://windytv.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>



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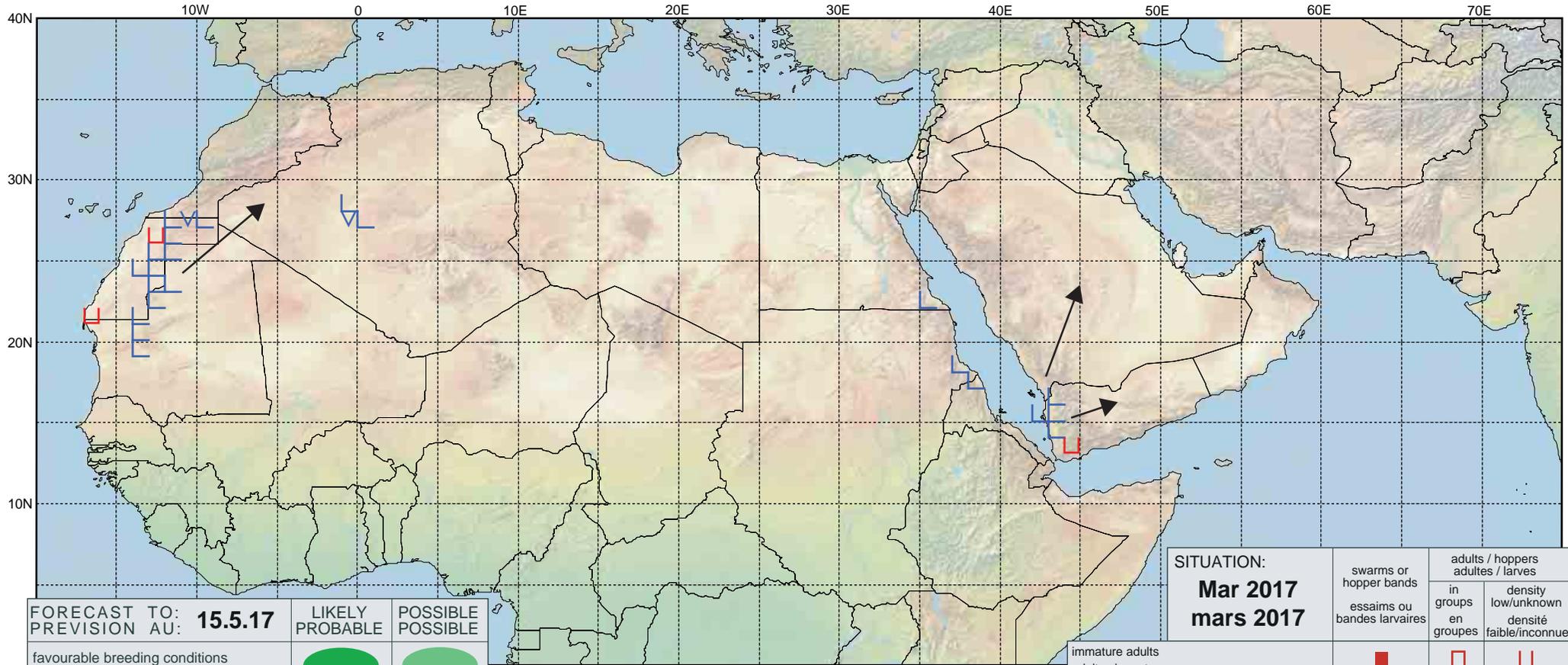
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Desert Locust Summary

Criquet pèlerin - Situation résumée



FORECAST TO:
PREVISION AU: **15.5.17**

LIKELY
PROBABLE

POSSIBLE
POSSIBLE

favourable breeding conditions
conditions favorables à la reproduction



major swarm(s)
essaim(s) important(s)



minor swarm(s)
essaim(s) limité(s)



non swarming adults
adultes non essaimant



SITUATION:

Mar 2017
mars 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)

