

warning level: **CAUTION**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 438



**General Situation during March 2015
Forecast until mid-May 2015**

(2.4.2015)

The Desert Locust situation improved during March in the winter breeding areas along both sides of the Red Sea due to ongoing control operations and drying ecological conditions. Nevertheless, a few adult groups and swarms formed in Sudan and Eritrea, and there remains a risk that some of these may move into the Nile Valley in northern Sudan and breed near irrigated cropping areas. Very few locusts were reported in other regions. During the forecast period, small-scale breeding is likely to cause locust numbers to increase slightly in the spring breeding areas of Northwest Africa, the interior of the Arabian Peninsula, and in southeast Iran and southwest Pakistan as a result of good rains that fell in March.

Western Region. The situation remained calm in March and no locusts were reported in the region. As good rains fell in parts of the spring breeding areas south of the Atlas Mountains in Morocco and Algeria, small-scale breeding is likely to cause locust numbers to increase slightly during the forecast period in both countries as well as in northern Western Sahara, and perhaps in southwest Libya and northern Mauritania.

Central Region. The situation improved in the winter breeding areas along both sides of the Red Sea due to control operations and drying conditions in March. In Sudan, ground and aerial control operations declined, treating mainly locally bred adult groups and swarms on the southern coast. A few adult groups

and swarms moved into this area from Eritrea where control was in progress against similar infestations. Locust numbers declined on the Red Sea coast in Saudi Arabia where limited control operations were conducted in the north. Low numbers of adults persisted on the Red Sea and Gulf of Aden coasts in Yemen. Good rains fell in the spring breeding areas in the interior of Saudi Arabia and Yemen where small-scale breeding may occur during the forecast period, causing locust numbers to increase slightly. The situation remained calm in Egypt where an individual locust was seen in the south.

Eastern Region. The situation remained calm during March. Isolated solitarious adults were present in the interior of southeast Iran. As good rains fell in spring breeding areas along the coast of southeast Iran and southwest Pakistan, small-scale breeding is likely to cause locust numbers to increase slightly during the forecast period, mainly along the coast and in adjacent interior areas of both countries.

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 2015

Ecological conditions continued to improve in parts of the spring breeding areas in Northwest Africa, the Arabian Peninsula and Southwest Asia where good rains fell during March.

In the **Western Region**, good rains fell in parts of Morocco and Algeria during March. In Morocco, light rain fell during the first decade over central areas of Western Sahara, extending to adjacent areas of northern Mauritania. As a result of rainfall during February, ecological conditions became favourable for breeding in March south of the Atlas Mountains in Morocco, primarily in the Ziz-Ghris and Draa Valleys, in the northeast near Bouarfa, and in the northern part of Western Sahara near Boujdour, between Laayoune and Boucraa, and in W. Sakia Al Hamra. In Algeria, moderate rains fell in the south and southeast. Ecological conditions improved in these areas as well as in the Bechar, Tindouf and Adrar areas. In Mauritania, light rain fell at the end of the first decade in parts of the west, northwest and north. Ecological conditions remained unfavourable for locust survival and breeding except for a few localities in the extreme north of Tiris-Zemmour. Green vegetation persisted in a few places of Timetrine and the northern Adrar des Iforas in northern Mali and in some wadis of the Air Mountains in northern Niger. Elsewhere, dry conditions prevailed in the Sahel of West Africa.

In the **Central Region**, good rains fell at times during the last two decades of March in the spring breeding areas of the interior of Saudi Arabia and Yemen. Consequently, ecological conditions were becoming favourable for breeding. No significant rain fell in the winter breeding areas along both sides of the Red Sea, and vegetation continued to dry out in most areas except in a few places on the northern coast of the Red Sea in Eritrea, Yemen and Saudi Arabia.

In the **Eastern Region**, ecological conditions were favourable in the spring breeding areas of southeast Iran, mainly on the coast near Jask and in the Jaz Murian Basin of the interior in March. Good rains that fell along the coast from Jask to Pasni, Pakistan

during the second decade should allow breeding conditions to improve in all coastal areas.



Area Treated

Eritrea	1,414 ha (1-10 March)
Saudi Arabia	440 ha (March)
Sudan	12,451 ha (March)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

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

• FORECAST

Isolated adults may be present in the north between Bir Moghreïn and Zouerate, and breed on a small scale if more rainfall occurs.

Mali

• SITUATION

Although surveys were not carried out in March, locals reported isolated adults at three places near Ti-n-kar (1926N/0022W) in the Timetrine area of the north.

• FORECAST

Low numbers of adults may be present and are expected to persist in parts of the Adrar des Iforas and Timetrine.

Niger

• SITUATION

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

• FORECAST

Isolated adults may be present in parts of the Air Mountains where they are likely to persist in areas that remain green. No significant developments are likely.

Chad

• SITUATION

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

• FORECAST

No significant developments are likely.

Senegal

• SITUATION

No reports were received during March.

- **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, no locusts were seen during surveys carried out in the central and southern Sahara between Beni Abbes (3011N/0214W) and Bechar (3135N/0217W), and near Adrar (2753N/0017W), Illizi (2630N/0825E) and Tamanrasset (2250N/0528E).

- **FORECAST**

Low numbers of adults may be present near Beni Abbes and in other parts of the central and southern Sahara where small-scale breeding could occur in any areas that receive rainfall.

Morocco

- **SITUATION**

No locusts were seen during surveys in the Draa Valley along the Algerian border from south of Fom El Hassan (2901N/0853W) to southeast of Tata (2944N/0758W) on 19-26 March.

- **FORECAST**

Low numbers of adults may be present and breed on a small scale south of the Atlas Mountains in the Draa and Ziz-Ghris valleys, and in northern areas of Western Sahara.

Libya

- **SITUATION**

No reports were received during March.

- **FORECAST**

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

Tunisia

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

During March, groups of immature and mature adults persisted on the southern coast between Adobana (1810N/3816E) and the Eritrean border and, to a lesser extent, on the coast south of Suakin

(1906N/3719E). A few late instar hopper groups and bands were present in the first week. Several immature and mature swarms were seen at times on the coast near Adobana, in Tokar Delta, and along a 70 km stretch of Khor Baraka from Tokar (1827N/3741E) on 12-18 March. Some of the adult groups and swarms reportedly came from adjacent areas in Eritrea. Control operations treated 12,451 ha on 1-18 March, of which 6,150 ha were by air.

- **FORECAST**

A few small groups or swarms may form on the southern coast, supplemented by similar populations from adjacent areas of Eritrea, and move inland towards the Nile Valley in River Nile and Northern States where they will mature and lay eggs near irrigated cropping areas.

Eritrea

- **SITUATION**

During the first decade of March, hopper bands and gregarious immature and mature adults persisted on the northern coast between Mehimet (1723N/3833E) and Karora (1745N/3820E), and on the central coast near Embere (1628N/3856E). Some of the adults were copulating. Immature adults were reported on the eastern escarpment near Naro (1626N/3840E). On 13 March, a swarm was seen in the western lowlands along Khor Baraka near Kerkebet (1618N/3724E). Ground teams treated 1,414 ha on the Red Sea coast.

- **FORECAST**

Locust infestations will decline on the Red Sea coast where groups and small swarms are likely to form that could move into the highlands and north along the coast into Sudan.

Ethiopia

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

Djibouti

- **SITUATION**

No reports were received during March.

- **FORECAST**

No significant developments are likely.



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Somalia

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

Egypt

- **SITUATION**

During March, an isolated immature solitarious adult was seen at one location in the Allaqi area near the eastern shore of Lake Nasser. No locusts were seen on the Red Sea coastal plains.

- **FORECAST**

No significant developments are likely.

Saudi Arabia

- **SITUATION**

During March, locust numbers declined on the Red Sea coastal plains. Scattered immature solitarious adults were present on the northern coast between Masturah (2309N/3851E) and Yenbo (2405N/3802E) and, to a lesser extent, on the central coast near Lith (2008N/4016E). A group of immature adults was seen near Bader (2346N/3847E). Control operations treated 440 ha. No locusts were seen in the spring breeding areas of the interior between Gassim (2621N/4358E) and Hail (2731N/4141E).

- **FORECAST**

A few small groups of adults may form on the northern Red Sea coast and move to the Hail and Gassim areas of the interior where small-scale breeding will occur if rains fall.

Yemen

- **SITUATION**

During March, isolated immature and mature solitarious adults were present in a few places along the northern coast of the Red Sea between Al Zuhrah (1541N/4300E) and Suq Abs (1600N/4312E), on the central coast near Al Qutai (1454N/4312E), and on the Gulf of Aden coastal plains northwest of Aden near Am Rija (1302N/4434E).

- **FORECAST**

No significant developments are likely.

Oman

- **SITUATION**

During March, no locusts were seen during surveys in northern coastal and interior areas and on the Musandam Peninsula.

- **FORECAST**

Low numbers of adults may appear on the Batinah coast and perhaps in Sharqiya and on the central coast, and breed on a small scale if rainfall occurs.

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, isolated mature adults were seen near Ghale Ganj (2731N/5752E) in the Jaz Murian Basin of the interior. No locusts were seen on the southeast coast near Jask (2540N/5746E).

- **FORECAST**

Low numbers of adults are likely to appear and breed on a small scale on the southeast coast between Jask and Chabahar and in the Jaz Murian Basin of the interior.

Pakistan

- **SITUATION**

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

- **FORECAST**

Isolated adults may appear and breed on a small scale in coastal areas of Baluchistan.

India

- **SITUATION**

No locusts were seen during surveys carried out in Rajasthan during March.

- **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/ECLC Desert Locust Information Service (eclc@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.

Locust tools and resources. FAO has developed a number of tools that National locust information officers and other interested individuals can use for Desert Locust early warning and management:

- **MODIS.** Vegetation imagery every 16 days (http://iridl.ideo.columbia.edu/maproom/.Food_Security/Locusts/Regional/MODIS/index.html)
- **MODIS.** Daily rainfall imagery in real time (http://iridl.ideo.columbia.edu/maproom/.Food_Security/Locusts/index.html)
- **RFE.** Rainfall estimates every day, decade and month (http://iridl.ideo.columbia.edu/maproom/.Food_Security/Locusts/index.html)
- **Greenness maps.** Dynamic maps of green vegetation evolution every decade (http://iridl.ideo.columbia.edu/maproom/Food_Security/Locusts/Regional/greenness.html)
- **eLocust3 training videos.** A set of 15 introductory training videos are available on YouTube: https://www.youtube.com/playlist?list=PLjxRk5CAwvG_0iFxfZ5C2fLByF3jvhHOx
- **RAMSESV4 training videos.** A set of basic training videos are available on YouTube: <https://www.youtube.com/playlist?list=PLjxRk5CAwvG-PximOs9lCMxzZtYU93tvb>

- **RAMSESV4 and eLocust3 updates.** Updates can be downloaded from <https://sites.google.com/site/rv4elocust3updates/home>
- **FAOLOCUST Twitter.** The very latest updates are posted on Twitter (<http://www.twitter.com/faolocust>)
- **FAOLocust Facebook.** A social means of information exchange using Facebook (<http://www.facebook.com/faolocust>)
- **Slideshare.** Locust presentations and photos available for viewing and download (<http://www.slideshare.net/faolocust>)
- **eLERT.** A dynamic and interactive online database of resources for locust emergencies (<http://sites.google.com/site/elertsite>)

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

- **Desert Locust situation updates.** Archives
- **eLocust3.** Activities – DLIS
- **RAMSESV4.** Activities – DLIS
- **CRC Contingency Planning Workshop report.** Publications – Reports
- **CRC/SWAC DLIO Workshop report.** Publications – Reports

2015 events. The following activities are scheduled or planned:

- **SWAC.** 21st annual Iran/Pakistan Joint Survey (5-25 April)
- **CLC/PRO/EMPRES-WR.** Regional workshop for Desert Locust Information Officers in the Western Region, Nouakchott, Mauritania (8-12 June)



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).



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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

- July - September/October

WINTER RAINS AND BREEDING

- October - January/February

SPRING RAINS AND BREEDING

- February - June/July

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.

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.

RECESSION

- period without widespread and heavy infestations by swarms.

REMISSION

- period of deep recession marked by the complete absence of gregarious populations.

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

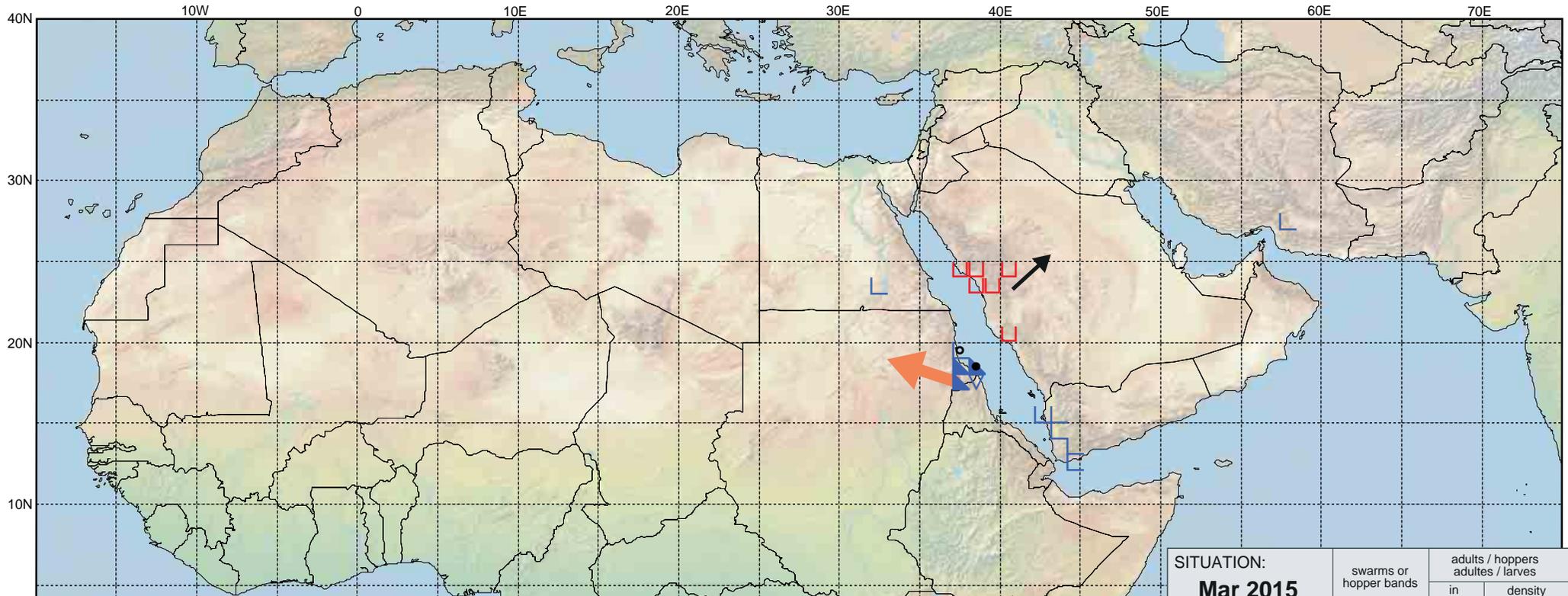
- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.



Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU:	15.05.15	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 2015 mar 2015	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)			