

warning level: **CAUTION**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 445



**General Situation during October 2015
Forecast until mid-December 2015**

(3.11.2015)

The Desert Locust situation remained calm during October. Although seasonal rains nearly ended in the northern Sahel of West Africa and Sudan, late breeding occurred in Niger and commenced in northwest Mauritania. Nevertheless, locust numbers remained low. Unusually heavy and widespread rains may allow ecological conditions to remain favourable for up to six months in northern Mauritania and adjacent areas of Algeria, Morocco and Western Sahara as well as in southern Yemen from tropical cyclone Chapala. Above-average rains related to El Niño may fall in northern Somalia. During the forecast period, small-scale breeding will cause locust numbers to increase gradually in northwest and northern Mauritania, Western Sahara, western Algeria, and along both sides of the Red Sea and Gulf of Aden. Countries should remain vigilant.

Western Region. The situation remained calm in October. Although seasonal rains declined in the summer breeding areas of the northern Sahel, ecological conditions remained favourable from previous rains. Scattered adults were present in Mauritania, northern Niger and northeast Chad. Small-scale breeding was detected in Niger and commenced in northwest Mauritania. Unusually heavy rains fell over a widespread area from northwest Mauritania to western Algeria and extended to Western Sahara and southern Morocco. This should allow ecological conditions to remain favourable for at least the next six months. Good rains also fell in

southwest Libya. Consequently, small-scale breeding is expected to occur during the forecast period, causing locust numbers to increase gradually in these areas.

Central Region. The situation remained calm during October. No locusts were present in the region except for a few scattered adults in the summer breeding areas of the interior in Sudan where seasonal rains had nearly ended and vegetation was drying out. Good rains began to fall in winter breeding areas along the Red Sea coast in Sudan, Eritrea and Yemen in early October that extended to Saudi Arabia at mid-month. This will cause ecological conditions to become favourable for small-scale breeding. Low numbers of adults from summer breeding areas are expected to appear along the coast and lay eggs that will start to hatch during the forecast period. Heavy rains associated with tropical cyclone Chapala are likely to result in favourable ecological conditions in southern coastal and interior areas of Yemen that could last well into next spring. In the Horn of Africa, above-average rains associated with a strong El Niño may fall during the winter and spring in northern Somalia where small-scale breeding is expected to commence during the forecast period.

Eastern Region. The situation remained calm during October. Only a few isolated adults persisted in the summer breeding areas of Pakistan near the border with India. 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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Weather & Ecological Conditions in October 2015

Vegetation remained green in many of the summer breeding areas in the northern Sahel of West Africa. Unusually heavy rains in northern Mauritania and adjacent areas will allow conditions to remain favourable for up to six months. A tropical cyclone in the Arabian Sea was moving towards Yemen.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) moved south of the summer breeding areas in the Sahel during the first decade of October and remained so for the remainder of the month except in southeast Mauritania where it moved north to Nema during the second decade. Consequently, very little rain fell except in northeast Mali during the first decade and in parts of southeast Mauritania during the second decade. Vegetation started to dry out in a few places of central and southeast Mauritania and near Fada in northeast Chad but remained green on the Tamesna Plains and in parts of the Air Mountains in northern Niger, and elsewhere in southern Mauritania. Light rains fell in the Hoggar Mountains in southern Algeria and vegetation was green in runoff areas west of Tamanrasset. Good rains fell in southwest Libya near Ghat. Unusually heavy and widespread rains fell between 15 and 24 October throughout Tiris-Zemmour in northern Mauritania from Zouerate to Bir Moghreïn and Bir Amrane, extending into Inchiri, Western Sahara (Bir Gandouz to Tan-tan), southern Morocco and western Algeria (Tindouf to Beni Abbes). In many places, rains far exceeded the long-term annual mean. Bir Moghreïn normally receives about 15 mm in October and about 45 mm in a year; 152 mm was reported on 21-25 October. Similarly, Tindouf received 56 mm compared to 32 mm in a normal year and 2 mm in October. As a result, ecological conditions are likely to remain favourable for locust breeding and survival until at least next spring.

In the **Central Region**, the Inter-Tropical Convergence Zone (ITCZ) was located south of the summer breeding areas in Sudan and Eritrea during October. Nevertheless, light rains fell in southern areas of northern Kordofan. Good rains fell along the

western side of the Red Sea Hills between Derudeb and Haiya. During the first week of the month, rains commenced in winter breeding areas in northeast Sudan along Wadi Oko/Diib and in northern coastal areas. Light showers fell elsewhere on the coast south of Port Sudan, on the Egyptian coast south of Abu Ramad, and on the central and northern Eritrean coast. Light rains fell along parts of the Red Sea coastal plains in Yemen and in Saudi Arabia between Jizan and Jeddah, and on the northern coast near Umm Lajj. Ecological conditions were improving in many of these areas. Light rain also fell in parts of northern Oman and on the Somali plateau west of Las Anod, extending south to the Ogaden in eastern Ethiopia. At the end of the month, tropical cyclone Chalapa (04A) intensified over the Arabian Sea and moved towards southern Yemen.

In the **Eastern Region**, vegetation remained green in many parts of the summer breeding areas along both sides of the Indo-Pakistan border during October even though the southwest monsoon rains ended in September. Ecological conditions remained dry in the Lasbela area west of Karachi. Light rains fell in parts of the spring breeding areas in the Jaz Murian Basin in the interior of southeast Iran and near Turbat in southwest Pakistan.



Area Treated

No control operations were reported during October.



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During October, isolated immature and mature solitary adults were present in the southeast near Oualata (1717N/0701W), southeast of Nema (1636N/0715W), and north of Aioun El Atrous (1639N/0936W), in the centre north of Kiffa (1638N/1124W), near Tidjikja (1833N/1126W) and north of Magta Lahjar (1730N/1305W), and in the southwest between Boutilimit (1732N/1441W) and Rkiz (1658N/1514W). Some mature adults appeared in the northwest near Akjoujt (1945N/1421W) and Atar (2032N/1308W). Locust numbers remained low and densities were less than 200 adults/ha. Small-scale egg-laying commenced during the second week near Akjoujt and Aguilal Faye (1827N/1444W), giving rise

to scattered early instar solitary hoppers during the last week of the month.

- **FORECAST**

As vegetation dries out in the summer breeding areas, there remains a low risk that a few small groups could form. Small-scale breeding in the northwest will cause locust numbers to increase as hatching continues during November, and the first generation starts to fledge after mid-month. Scattered adults may be present in Tiris-Zemmour and small-scale breeding is likely in areas where unusually heavy rains fell in October.

Mali

- **SITUATION**

The hoppers and adults reported in the Kidal (1827N/0125E) region in early September were confirmed to be grasshoppers. No locusts were seen during a survey carried out in the southern Adrar des Iforas near Kidal and on the Tamesna plains east of Tin Essako (1826N/0229E) on 3-11 October.

- **FORECAST**

Low numbers of locusts may be present and breeding on a small-scale in parts of the Adrar des Iforas and Tamesna, and to a lesser extent in parts of Timetrine and the Tilemsi Valley. There remains a low to moderate risk that a few small groups will form once vegetation begins to dry out.

Niger

- **SITUATION**

During October, small-scale breeding occurred on the Tamesna plains near In Abangharit (1754N/0559E), west of Arlit (1843N/0721E), and from the Tazerzait Plateau (1832N/0449E) to the Algerian border. Low numbers of solitary hoppers, mainly third instar, were present in these areas mixed with isolated adults. Some of the adults were copulating and laying eggs. No surveys were carried out elsewhere in southern Tamesna or in central pasture areas.

- **FORECAST**

Small-scale breeding will continue in Tamesna, causing locust numbers to increase in November. Small-scale breeding may also be in progress in central areas between Tahoua and Termit Massif and in the Air Mountains. There is a moderate risk that a few small groups will form once vegetation begins to dry out.

Chad

- **SITUATION**

During October, isolated immature and mature solitary adults persisted in the northeast between Arada (1501N/2040E) and Fada (1714N/2132E). A

few adults were seen laying eggs at mid-month near Fada.

- **FORECAST**

Isolated adults are likely to persist in the few areas that remain green in the northeast. No significant developments are likely.

Senegal

- **SITUATION**

No reports were received during October.

- **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 October, an isolated fledgling was present west of Tamanrasset (2250N/0528E). Elsewhere, no locusts were seen during surveys carried out in the central Sahara near Adrar (2753N/0017W) and In Salah (2712N/0229E), and in the south near Tamanrasset and In Guezzam (1937N/0552E).

- **FORECAST**

Scattered adults may appear in the west between Tindouf and Beni Abbes, in the central Sahara near irrigated areas in the Adrar region, in runoff areas to the south and west of the Hoggar Mountains, and in the extreme south near the Mali border. Small-scale breeding could occur in these areas, especially in the west where unusually good rains fell in October.

Morocco

- **SITUATION**

During October, no locusts were seen near the coast from Guelmim (2859N/1003W) to north of Dakhla (2342N/1555W).

- **FORECAST**

Low numbers of adults are expected to appear and breed on a small scale in areas of recent rainfall in the Western Sahara.



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Libya

- **SITUATION**

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

- **FORECAST**

Isolated adults may appear and breed on a small scale in areas of recent rainfall in the southwest near Ghat.

Tunisia

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

During October, isolated immature adults were present in North Kordofan between Sodiri (1423N/2906E) and Abu Uruq (1554N/3027E), and mature adults were present at one location west of the Red Sea Hills between Berber (1801N/3400E) and Haiya (1820N/3621E).

- **FORECAST**

Locusts will decline in the summer breeding areas as vegetation dries out and adults move to the winter breeding areas and breed on a small scale in areas of recent rainfall along the Red Sea coast and in subcoastal areas.

Eritrea

- **SITUATION**

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

- **FORECAST**

Scattered adults are likely to appear in areas of recent rainfall and runoff on the Red Sea coastal plains between Sheib and Karora. Small-scale breeding will cause locust numbers to increase during the forecast period.

Ethiopia

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

Djibouti

- **SITUATION**

No reports were received during October.

- **FORECAST**

No significant developments are likely.

Somalia

- **SITUATION**

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

- **FORECAST**

Scattered adults are likely to appear on the northwest coastal plains and breed on a small scale in areas that receive rainfall.

Egypt

- **SITUATION**

During October, isolated immature and mature solitary adults were present near Lake Nasser in the Tushka (2247N/3126E) area. No locusts were seen during surveys in Garf Husein (2317N/3252E), Allaqi (2238N/3315E), El Sheikh El Shazly (2412N/3438E) areas, and on the Red Sea coast between Berenice (2359N/3524E) and the Sudan border.

- **FORECAST**

Scattered adults are likely to appear on the Red Sea coastal plains and subcoastal areas between Shalatyn and Halaib, and breed on a small-scale in areas of recent rainfall.

Saudi Arabia

- **SITUATION**

No locusts were seen during surveys carried out in October along the Red Sea coastal plains near Jizan (1656N/4233E), Qunfidah (1909N/4107E) and Lith (2008N/4016E) as well as near Mecca (2125N/3949E).

- **FORECAST**

Scattered adults are likely to appear on the Red Sea coastal plains between Umm Lajj and Jizan, and breed on a small-scale in areas of recent rainfall.

Yemen

- **SITUATION**

During October, scattered immature and mature solitary adults were seen during a survey on the Red Sea coast near Al Zuhrah (1541N/4300E) and between Al Qutai (1454N/4312E) and Bayt Al Faqih (1430N/4317E).

- **FORECAST**

Scattered adults may be present and breeding on a small-scale in areas of recent rainfall on the Red

Sea and Gulf of Aden coasts. Favourable ecological conditions are expected to develop and persist for several months along the Mukalla coast and in adjacent interior areas as a result of heavy rains and flooding from tropical cyclone Chapala.

Oman

- SITUATION

No locusts were seen during surveys on the Musandam Peninsula, on the Batinah coast near Jamma (2333N/5733E), in the northern interior near Adam (2223N/5731E), and in the south near Thumrait (1736N/5401E) in October.

- FORECAST

No significant developments are likely.

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

No locusts were seen on the southeast coast near Jask (2540N/5746E) during October.

- FORECAST

No significant developments are likely.

Pakistan

- SITUATION

During the first half of October, isolated mature solitary adults persisted in a few places to the east of Rahimyar Khan (2822N/7020E) in the Cholistan and Khipro desert near the Indian border. No locusts were seen in the Las Bela area west of Karachi (2450N/6702E). No surveys were undertaken after mid-month.

- FORECAST

No significant developments are likely.

India

- SITUATION

No locusts were seen during surveys carried out in Rajasthan and Gujarat during October.

- FORECAST

No significant developments are likely.

Afghanistan

- SITUATION

No reports received.

- FORECAST

No significant developments are likely.

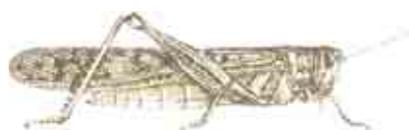
Announcements

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 (ecl@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



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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 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:

- **Pesticide Referee Group follow-up.** Recommendations of the Stakeholder Workshop on the Procurement and Supply of Pesticide for Locust Control, Rome (2-3 September) – Publications (Reports by Topic, Miscellaneous)
- **El Niño.** Potential impacts on the Horn of Africa – Activities (Climate Change)
- **Current threats.** Unusually heavy rains in Northwest Africa; Yemen cyclone – Information (Current threats)
- **Desert Locust Alert.** Issued on 28 October – Archives (Briefs, 2015)
- **Cyclone Chapala.** Impact on Yemen – Archives (Threats, 2015)

Training videos. See the new links above for the eLocust3 and RAMSESv4 training videos on YouTube.

2015 events. The following activities are scheduled or planned:

- **CLCPRO.** Regional workshop on Desert Locust applied research in the Western Region, Tunis, Tunisia (23-27 November)
- **EMPRES/WR.** 14th Liaison Officers Meeting, Nouakchott, Mauritania (7-11 December)
- **EMPRES/WR.** 11th Steering Committee Meeting, Nouakchott, Mauritania (14-15 December)



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

- July - September/October

WINTER RAINS AND BREEDING

- October - January/February

SPRING RAINS AND BREEDING

- February - June/July

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.



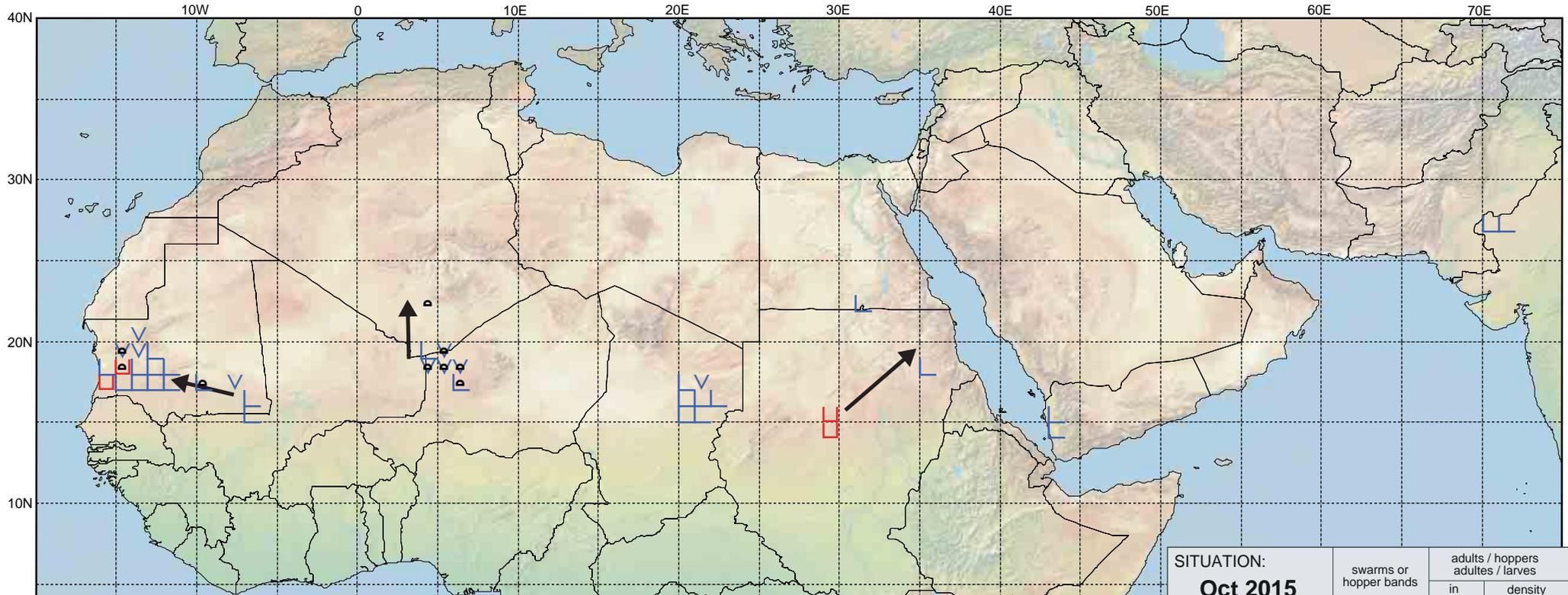
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU:	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: Oct 2015 oct 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)			