

warning level: **CAUTION (Mauritania)**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 364

(2 February 2009)



General Situation during January 2009 Forecast until mid-March 2009

The Desert Locust situation remained calm during January. Limited ground control operations continued in northwest Mauritania against hoppers and a few small groups of adults. Only low numbers of locusts were present in the winter breeding areas along both sides of the Red Sea. Small-scale breeding occurred in Eritrea and, to a lesser extent, on the coast in Sudan, Saudi Arabia and Yemen. Scattered adults were present on the coast in northwest Somalia and a few adults were seen in southern Egypt. No locusts were reported elsewhere in the recession area. During the forecast period, locusts will persist in the above-mentioned areas and continue to breed on a small scale as long as ecological conditions remain favourable.

Western Region. Ground control operations continued in Mauritania against residual populations of solitary hoppers and adults east of Nouakchott, treating more than 600 ha during January. Although adult densities increased slightly and a few groups of *transiens* adults formed, the situation remained under control. Limited breeding occurred in adjacent areas and only isolated adults were seen in the north. No locusts were seen during surveys carried out in Morocco, Algeria and Libya or were reported in other countries in the region. Residual populations will persist during the forecast period in northwest Mauritania and small-scale breeding could occur in parts of northern Mauritania, Western Sahara and central Algeria as temperatures warm up.

Central Region. Small-scale breeding occurred during January along both sides of the Red Sea in Sudan, Eritrea, Yemen and Saudi Arabia but solitary hopper and adult numbers remained low. The potential for breeding was greatest in Eritrea where large areas of green vegetation were present on the northern coastal plains. Limited breeding may also be in progress on the Gulf of Aden coast in northwest Somalia where locust numbers increased slightly in January. During the forecast period, limited hatching will occur in the winter breeding areas in February with fledging by the end of March. Elsewhere, isolated adults were seen on a farm in southern Egypt.

Eastern Region. The locust situation remained calm during January as generally dry conditions prevailed and no locusts were reported. Small-scale breeding is expected to occur during the forecast period in the spring breeding areas along the coast in southeast Iran and western Pakistan.

The FAO Desert Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by e-mail, FAO pouch and airmail by the Locusts and Other Migratory Pests Group, AGP Division, FAO, 00153 Rome, Italy. It is also available on the Internet.

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Weather & Ecological Conditions in January 2009

Very little rain fell in the recession area during January for the third consecutive month. Nevertheless, ecological conditions remained favourable for breeding on the Red Sea coast in Eritrea and to a lesser extent in Sudan, Saudi Arabia and Yemen as well as in northwest Somalia.

In the **Western Region**, very little rain fell during January except for light showers in parts of central Mauritania and in the Algerian Sahara near Tindouf, Adrar and Tamanrasset, and near Bir Bou Mokhtar on the Malian border. In Mauritania, strong winds reduced visibility in the north and temperatures were slightly higher than normal. Ecological conditions remained favourable for locust survival and small-scale breeding in the wadis in Tiris Zemmour but vegetation was starting to dry out in Inchiri and Adrar. Vegetation was drying out in southern Algeria. In northwest Libya, vegetation was green or becoming green in parts of the Al Hamada Al Hamra plateau. South of the Atlas Mountains in Morocco, annual vegetation became green in the northeast near Bouarfa and remained green along the Draa Valley. In Western Sahara, light rains fell at times in the north and vegetation remained green east of Smara while small patches of green vegetation persisted further south between Bir Anzarane and Tichla. Limited amounts of green vegetation persisted in parts of the Adrar des Iforas in northern Mali and in the Air Mountains in Niger. Light rains fell in late January in the western Tenere Desert and southeast of Bilma in eastern Niger.

In the **Central Region**, very little rain fell for the second consecutive month in winter breeding areas along both sides of the Red Sea coast where only some light showers fell in Saudi Arabia between Jizan and Lith. Nevertheless, vegetation was green and ecological conditions to be favourable on the Red Sea coast from Massawa, Eritrea to Port Sudan, on the central Tihama in Yemen and on the southern coast in Saudi Arabia. Conditions were also favourable for breeding in northwest Somalia between Lughaye and Djibouti. In Oman, light rains may have fallen on the central coast between Duqm and Marmul while slightly

heavier showers occurred on the northern Batinah coast where green vegetation was present.

In the **Eastern Region**, low to moderate rains fell in mid-January on the southeast coast of Iran between Jask and the Pakistani border. Some showers extended along the coast of Baluchistan to Pasni, Pakistan. Vegetation was green near Jask, Iran. Dry conditions prevailed in Rajasthan, India.



Area Treated

Mauritania 13,427 ha (December, corrected)
621 ha (January)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During January, locust numbers continued to decline in the Zgueimir area east of Nouakchott between Aguilal Faye (1827N/1444W) and Akjoujt (1945N/1421W) where scattered solitarious hoppers and adults and a few small groups of *transiens* immature and mature adults were present. Adult densities increased slightly, reaching 4,500 adults/ha by the end of the month. Ground teams treated 621 ha in January.

Elsewhere, low numbers of second to fifth instar hoppers and maturing adults were present between Tidjikja (1833N/1126W) and Oujeft (2003N/1301W), between Chinguetti (2027N/1221W) and Ouadane (2056N/1137W) and near Zouerate (2244N/1221W). Isolated solitarious immature and mature adults were seen in a few places in Dakhlet Nouadhibou, Inchiri and near Bir Moghreïn (2510N/1135W) in Tiris Zemmour.

• FORECAST

Some of the residual populations in the Zgueimir area are likely to persist while others could still move north to Inchiri and Tiris Zemmour. Small-scale breeding could occur in the north if ecological conditions remain favourable. Surveys should be maintained in all areas to monitor the situation on a regular basis.

Mali

• SITUATION

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

- **FORECAST**

Scattered locusts are likely to be present and are expected to persist in the main wadis of the Adrar des Iforas. Breeding is unlikely to occur unless there is rainfall during the forecast period.

Niger

- **SITUATION**

A late report indicated that no locusts were reported in December. No surveys were carried out and no locusts were reported during January.

- **FORECAST**

Scattered locusts are likely to be present and are expected to persist in parts of the Air Mountains and breed on a small-scale if rains fall during the forecast period.

Chad

- **SITUATION**

No reports were received in January.

- **FORECAST**

Low numbers of adults are likely to concentrate and persist in areas that remain green.

Senegal

- **SITUATION**

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

- **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**

A late report indicated that scattered mature solitary adults were present along the Malian border near Tin Zaouatene (1958N/0258E) in December. No locusts were seen elsewhere during surveys carried out in the south or in the west near Tindouf (2741N/0811W) and Beni Abbes (3011N/0214W).

During January, no locusts were seen during surveys in the west near Tindouf and Beni Abbes, in the central Sahara near Adrar (2753N/0017W) and in the south near Tamanrasset (2250N/0528E), In Guezzam (1937N/0552E) and Tin Zaouatene.

- **FORECAST**

Low numbers of solitary adults may be present in the south where they are likely to persist during the forecast period. Similar numbers may also be present in the central Sahara where they could breed on a

small scale on the edge of irrigated areas near Adrar and west of Bechar.

Morocco

- **SITUATION**

No locusts were seen during surveys carried out in January in the northeast near the Algerian border between Bouanane (3202N/0303W) and Figuig (3207N/0113W), and in the Western Sahara east of Smara (2644N/1140W) as well as further south between Bir Anzarane (2353N/1431W), Bir Gandouz (2136N/1628W) and Tichla (2137N/1453W).

- **FORECAST**

Scattered adults may be present in the northeastern and southern parts of the Western Sahara. As temperatures warm up, small-scale breeding could occur in areas where conditions remain favourable.

Libyan Arab Jamahiriya

- **SITUATION**

No locusts were seen during a survey carried out on 1-8 January in the Al Hamada Al Hamra plateau (3000N/1200E) in the northwest.

- **FORECAST**

No significant developments are likely.

Tunisia

- **SITUATION**

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

- **FORECAST**

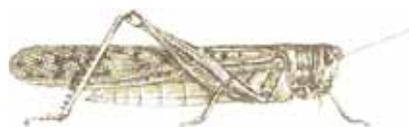
No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

During January, scattered immature and mature solitary adults were present on the Red Sea coastal plains at densities up to 250 locusts/ha near Suakin (1906N/3719E) and between Aqiq (1813N/3811E) and the Eritrean border. Small-scale breeding occurred on the southern plains near Aiterba (1753N/3819E) where second to fifth instar hoppers were seen at mid-month and adults were copulating the following week. No locusts were seen on the coast between Port Sudan (1938N/3713E) and the Egyptian border, or in the Tokar Delta.



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• Forecast

Limited hatching will occur on the coast near Aiterba by mid-February and hoppers will fledge by the end of March. Small-scale breeding may occur elsewhere on the Red Sea coastal plains between Aqiq and Suakin, and perhaps in Wadi Oko/Diib near Tomala and Sufiya. Consequently, locust numbers will increase slightly during the forecast period.

Eritrea

• SITUATION

During the first week of January, locust numbers increased slightly on the western side of the Akbanazouf Plains northeast of Shelshela (1553N/3906E) where small-scale breeding continued and third and fourth instar hoppers and solitarious adults were present. Scattered mature solitarious adults were copulating on the coast between Mersa Gulbub (1633N/3908E) and Mersa Teklay (1734N/3851E). Reports of hopper bands in the same area were not confirmed.

• FORECAST

Local breeding will continue on the Red Sea coast near Shelshela where fledging will occur in February. Small-scale breeding is likely to be in progress in other areas between Sheib and Karora and will continue during the forecast period, causing locust numbers to increase slightly.

Ethiopia

• SITUATION

No locusts were seen during a survey carried out in the Afar region between Dire Dawa (0935N/4150E) and the Danakil Desert from 25 December to 3 January and in the Somali Region on 19-31 January.

• FORECAST

No significant developments are likely.

Djibouti

• SITUATION

A late report indicated that no surveys were carried out and no locusts were reported in December. No surveys were carried out and no locusts were reported in January.

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

During January, scattered immature and mature solitarious adults at densities up to 400 locusts/ha were seen at a few places on the northwest coast near Sillil (1058N/4326E). No locusts were seen during surveys on the plateau near Boroma (0956N/4313E) and the Ethiopian border.

• FORECAST

Small-scale breeding will occur the northwest coast between Lughaye and the Djibouti border, causing locust numbers to increase slightly. No significant developments are likely.

Egypt

• SITUATION

During January, isolated solitarious adults were seen on a farm near Abu Simbel (2219N/3138E) on the 8th. Elsewhere, no locusts were seen during surveys carried out on the Red Sea coastal plains and in Wadi Diib between the Sudanese border and Abu Ramad (2224N/3624E), in the Allaqi area east of Lake Nasser, along Lake Nasser and in the Western Desert near Sh. Oweinat (2219N/2845E).

• FORECAST

Isolated adults are likely to persist near Lake Nasser.

Saudi Arabia

• SITUATION

In early January, scattered adults and hoppers were seen near Jizan (1656N/4233E) during a joint Yemen/Saudi Arabia survey along the southern coastal plains of the Red Sea. Small-scale breeding also occurred on the coast between Jizan and Lith (2008N/4016E) where solitarious third and fourth instar hoppers and scattered immature and mature adults were present. A few adults were laying eggs near Qunfidah (1909N/4107E).

• FORECAST

Low numbers of locusts will persist along the Red Sea coastal plains and breed on a small scale between Lith and Jizan. Limited hatching is expected near Qunfidah in mid-February and hoppers will fledge by the end of March.

Yemen

• SITUATION

A late report indicated that no surveys were carried out and no locusts were reported in December.

During the first half of January, scattered immature and mature solitarious adults were seen on the central Red Sea coastal plains near Hodeidah (1450N/4258E) during a joint Yemen/Saudi Arabia survey. A few adults were laying eggs and scattered third to fifth instar hoppers were seen. No locusts were seen during

the joint survey on the northern plains near Midi (1619N/4248E) and the Saudi Arabian border. On the Gulf of Aden coast, scattered mature adults were present near Lahij (1303N/4453E).

• **FORECAST**

Small-scale breeding will continue on the central coastal plains of the Red Sea and is expected to occur on the Gulf of Aden coast near Lahij, causing locust numbers to increase slightly.

Oman

• **SITUATION**

No locusts were seen during surveys carried out on the Batinah coast and Musandam Peninsula on 20-25 January.

• **FORECAST**

Scattered adults may appear on the northern Batinah coast and breed on a small-scale in areas of recent rainfall.

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

• **FORECAST**

No significant developments are likely.

EASTERN REGION

Iran

• **SITUATION**

No locusts were seen during surveys carried out on the southeast coast near Jask (2540N/5746E) and Chabahar (2517N/6036E) from 15 December to 11 January, and again near Jask on 14-26 January.

• **FORECAST**

Low numbers of adults may be present on the southeast coast between Jask and the Pakistani border. As temperatures warm up, small-scale breeding is expected to occur in areas of recent rainfall.

Pakistan

• **SITUATION**

No reports were received during January.

• **FORECAST**

Low numbers of adults may be present on the Baluchistan coast between Pasni and the Iranian border. As temperatures warm up, small-scale breeding is expected to occur in areas of recent rainfall.

India

• **SITUATION**

No locusts were seen during surveys in Rajasthan and Gujarat up to 22 January.

• **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.

Google group. FAO DLIS has established a Google group for national locust information officers to exchange opinions and share experiences regarding data management and analysis, GIS, eLocust2 and satellite imagery. Interested information officers should contact DLIS (eclc@fao.org) for details.

MODIS imagery. Columbia University's International Research Institute for Climate and Society (IRI) provides 16-day 250-metre resolution



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MODIS imagery as well as daily and decadal rainfall imagery for monitoring breeding conditions in the Desert Locust recession area. These products can be downloaded in different formats suitable for GIS at: http://iridl.ldeo.columbia.edu/maproom/.Food_Security/Locusts/index.html. The site is available in English and French. Address comments and questions to Pietro Ceccato (pceccato@iri.columbia.edu).

New information on Locust Watch. Recent additions to the web site are:

- **DLCC working papers.** Working papers for the 39th session in English, French and Arabic are uploaded as they become available, so please check the *Latest Additions* section on Locust Watch regularly.

2009 events. The following activities are scheduled:

- **Biopesticides.** Workshop on the Future of Biopesticides for Locust Control, Rome (10-12 February)
- **DLCC.** 39th Session, Rome (10-13 March)
- **CLCPRO.** 5th Executive Committee (22-23 June) and 5th CLCPRO Session (24-27 June), Agadir (Morocco)



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

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.



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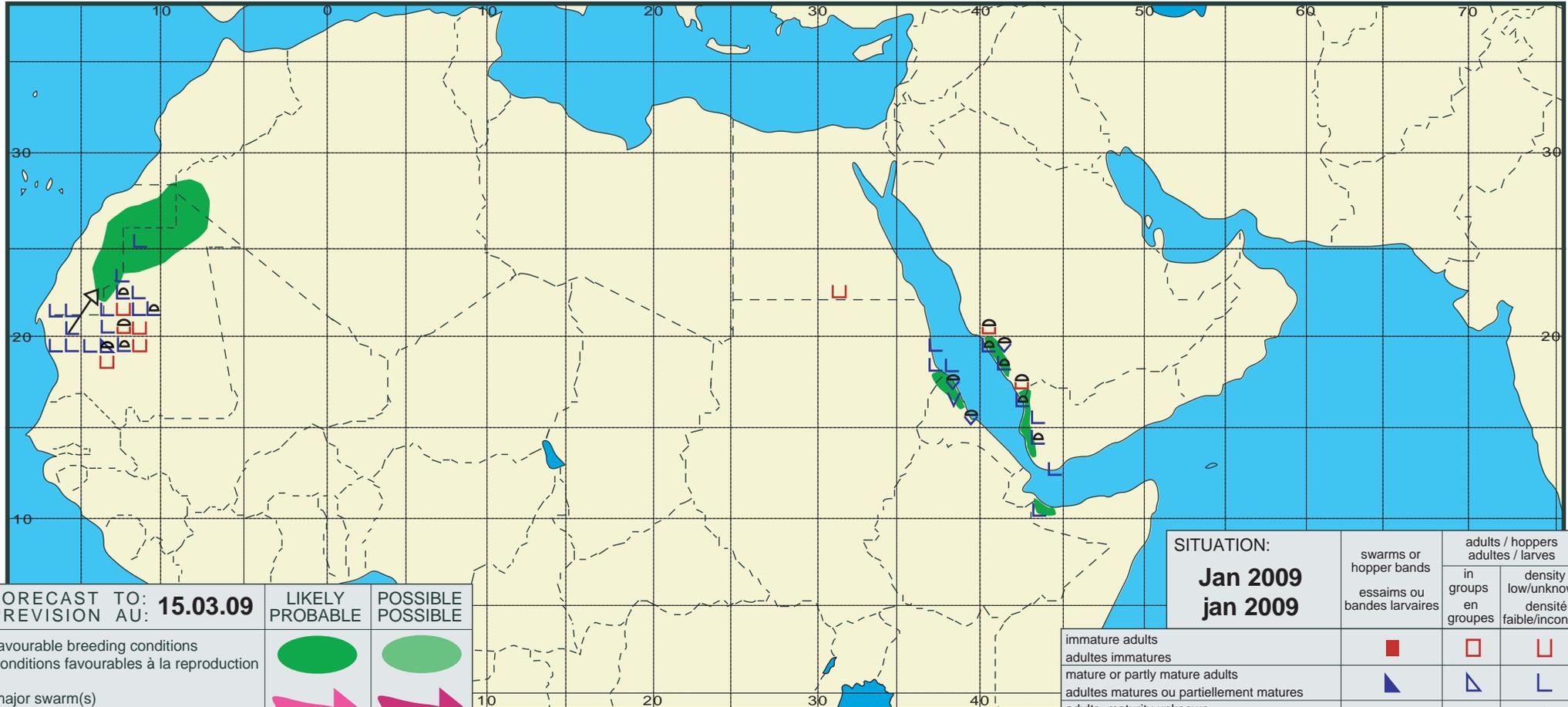
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU: 15.03.09	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: Jan 2009 jan 2009	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)			