

warning level: CAUTION (NW Africa)

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 361

(3 November 2008)



General Situation during October 2008 Forecast until mid-December 2008

The Desert Locust situation remained calm during October. As the seasonal rains ended and vegetation dried out, locusts declined in the summer breeding areas of the Sahel in West Africa and Sudan, and along the Indo-Pakistan border. Small-scale breeding occurred in western Mauritania and in southern Yemen. During the forecast period, breeding will continue in these places, causing locust numbers to increase slightly. Small-scale is expected to start in northern Mauritania where scattered adults are present and in adjacent areas of Western Sahara where unusually heavy rains fell in September. Breeding is also likely to take place on the Red Sea coastal plains and perhaps in eastern Yemen where torrential rains and flooding occurred in October. Elsewhere, low numbers of adults will persist in northern Mali, Niger and southern Algeria. The two areas of unusual rainfall in northwest Africa and Yemen need to be surveyed regularly to monitor breeding activities in the coming months.

Western Region. Locust numbers increased in western Mauritania from local breeding during October and as adults arrived from summer breeding areas where vegetation had dried out. Solitary adults were seen in northern areas that received heavy rains in September. Small-scale breeding will continue during the forecast period in western Mauritania where small groups could form, and is expected to commence in the northwest and north. Breeding is also expected to take place in

Western Sahara where ecological conditions had improved. Isolated solitary adults persisted in central and northeastern Chad. Surveys were still not possible in northeast Mali and northern Niger where scattered adults are probably present and are likely to concentrate in areas that remain green during the forecast period. No locusts were seen in southern Algeria or reported from other countries in the Region.

Central Region. Locust numbers declined in the summer breeding areas in the interior of Sudan during October and only scattered solitary adults remained in a few places between the Nile and the Red Sea Hills. No locusts were reported in winter breeding areas on the Red Sea coast of Egypt, Sudan and Eritrea. Low numbers of locusts were present on the Red Sea and Gulf of Aden coast in Yemen, and small-scale breeding occurred near Aden. Unusually heavy rains fell for two days in eastern Yemen, causing severe flooding and loss of property and life. The rains extended into central Oman. Once the waters recede, ecological conditions are expected to remain favourable for breeding for several months. During the forecast period, locusts will increase along both sides of the Red Sea and small-scale breeding is likely to commence as conditions become suitable. Most of the breeding may be concentrated on the coastal plains in Yemen that have received rains for the past few months.

Eastern Region. The locust situation remained calm in the Region. Low numbers of solitary adults persisted in the Cholistan Desert in Pakistan along the Indian border. No locusts were seen in Rajasthan, India. As the monsoon rains ended and vegetation is drying out, locust numbers will continue to decline. Isolated adults persisted on the coast in southeast Iran. During the forecast period, isolated adults are likely to persist in southeast Iran and appear in western Pakistan. No significant developments are likely.

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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No. 361

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Weather & Ecological Conditions in October 2008

Vegetation dried out in the summer breeding areas in the Sahel of West Africa and Sudan as well as along the Indo-Pakistan border. Green vegetation appeared in Western Sahara and adjacent areas from unusually heavy rains that fell in September. Similar rains fell in eastern Yemen and southern Oman in late October that will cause ecological conditions to improve.

In the **Western Region**, vegetation dried out during October in the summer breeding areas of the northern Sahel between Mauritania and Chad. Very little rain fell in these areas except for a few light showers during the second week of the month in southern Mauritania, and in Mali west of Tombouctou and in the northern Adrar des Iforas. Consequently, ecological conditions were not favourable for breeding. Light to moderate rains fell further north in Mauritania (Atar to Bir Moghrein and El Hank) and in Western Sahara (Tichla to Guelta Zemmur) during the first week of October and again at mid-month. Ecological conditions in these areas already started to improve from the unusually heavy rains that fell in September. High-density green vegetation was reported in the northern part of Western Sahara. With the additional rains, breeding conditions are expected to remain favourable for several months of a large portion of northern Mauritania and Western Sahara. Although little rain fell in southern Algeria, vegetation was green or becoming green in many areas between Tamanrasset and the Malian border. Light rains fell in northwest Libya in early October that could cause ecological conditions to improve for breeding in the Al Hamada Al Hamra.

In the **Central Region**, vegetation continued to dry out in the summer breeding areas in the interior of Sudan and in western Eritrea during October. However, small areas remained green along the Nile in Sudan and southern Egypt. Vegetation remained dry in the winter breeding areas along the Red Sea coast in southeast Egypt and in Eritrea. Light rains fell at times on the eastern side of the Red Sea along parts of the coast between Qunfidah, Saudi Arabia and Mocha, Yemen. In Yemen, vegetation was green

or becoming green on the central Red Sea coast and in some places on the Gulf of Aden coast west of Aden. On 21-22 October, unusually heavy rains associated with a tropical depression that formed in the Indian Ocean fell in eastern Yemen, mainly in Wadi Hadhramaut and along the coast from Mukalla to the central coast of Oman. The rains caused severe flooding and loss of property and life. Once the waters recede, ecological conditions could remain favourable for breeding for several months. In northern Somalia, light rains fell on the plateau and escarpment between Boroma and Berbera. Heavier rains from the tropical depression fell in northeast Somalia and Puntland on the 21st that could cause ecological conditions to improve for breeding. Light rains fell on the coast of Djibouti near the capital at the end of the month but vegetation remained dry.

In the **Eastern Region**, no significant rains fell during October in the summer breeding areas along both sides of the Indo-Pakistan border, and vegetation had nearly dried out. Vegetation was green enough in a few small areas on the southeastern coast of Iran to allow low numbers of Desert Locust to survive.



Area Treated

No control operations were reported in October.



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During October, solitarious hoppers and adults increased in the west as breeding continued in the Aouker north of Boutilimit (1732N/1441W) and adults arrived from the summer breeding areas in the south and southeast. Hopper densities increased to 2 hopper/m² and up to several hundred adults were seen per site. Most of the infestations were located between Tidjikja (1833N/1126W) and Nouakchott (1809N/1558W). Egg laying was reported at one place on the 14th. From mid-month onwards, an increasing number of mature solitarious adults were seen as surveys commenced in the northwest between Tijirat (1929N/1557W) and Atar (2032N/1308W), and in the north between Zouerate (2244N/1221W) and Bir Moghrein (2510N/1135W).

- **FORECAST**

Locusts will continue to increase slightly in the Aouker as further hatching and fledging are likely in areas that remain favourable. This could lead to the formation of small groups. Locust numbers will also increase in the northwest and north where small-scale breeding is expected to occur in areas of recent rainfall.

Mali

- **SITUATION**

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

- **FORECAST**

Scattered locusts are likely to be present and breeding on a small scale in parts of the Adrar des Iforas and, to a lesser extent, in Tamesna and west of Tombouctou. As vegetation dries out, locusts will concentrate in areas that remain green in the Adrar des Iforas where small-scale breeding could continue, causing locust numbers to increase slightly.

Niger

- **SITUATION**

No reports were received in October.

- **FORECAST**

Low numbers of locusts are likely to concentrate in areas that remain green in Tamesna and the western Air Mountains and breed on a small scale if conditions remain favourable.

Chad

- **SITUATION**

During October, isolated mature solitary adults were present at several places in Kanem between Salal (1448N/1712E) and Beurkia (1523N/1800E), and in the northeast between Abeche (1349N/2049E) and Fada (1714N/2132E).

- **FORECAST**

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

Senegal

- **SITUATION**

No reports were received in 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**

No locusts were seen during surveys carried out in October in the southern Sahara from Tamanrasset (2250N/0528E) to the Malian border between Bir Bou Mokhtar (2120N/0056E) and Tin Zaouatene (1958N/0258E).

- **FORECAST**

Limited breeding could occur in areas of previous rainfall south of Tamanrasset and along the Malian border, causing locust numbers to increase slightly.

Morocco

- **SITUATION**

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

- **FORECAST**

Scattered adults are likely to be present and breeding in areas of recent rainfall in Western Sahara. Surveys should be undertaken to monitor the situation on a regular basis.

Libyan Arab Jamahiriya

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

Tunisia

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

During October, mature solitary adults at densities up to 250 adults/ha were seen at a few places in the northeast between Atbara (1742N/3400E) and Derudeb (1731N/3607E) during surveys carried out between the Nile and the Red Sea Hills. No locusts were seen on the Red Sea coast in the Tokar Delta at the end of the month.

- **Forecast**

Low numbers of locusts are expected to appear on the Red Sea coast from summer breeding areas.



No. 361



No. 361

DESERT LOCUST BULLETIN

Small-scale breeding is expected to commence once rains fall.

Eritrea

• SITUATION

No locusts were seen during surveys carried out on the Red Sea coast between Massawa (1537N/3928E) and Karora (1745N/3820E) on 21-23 October.

• FORECAST

Scattered adults are likely to appear on the Red Sea coastal plains between Massawa and Karora. Small-scale breeding will occur in areas of rainfall or runoff.

Ethiopia

• SITUATION

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

During the last decade of October, no locusts were seen during surveys between Dire Dawa (0935N/4150E) and Jijiga (0922N/4250E), and along the railway to Djibouti.

• FORECAST

No significant developments are likely.

Djibouti

• SITUATION

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

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

No reports were received in October.

• FORECAST

Scattered adults may be present on the plateau between Boroma and Hargeisa. Small-scale breeding may occur in areas of recent rainfall on the plateau and the nearby escarpment.

Egypt

• SITUATION

During October, scattered immature and mature solitary adults were seen at two places near Lake Nasser and the Sudanese border between Abu Simbel (2219N/3138E) and Tushka (2247N/3126E) on the 22nd. No locusts were seen during surveys in the

Western Desert near Sh. Oweinat (2219N/2845E), near Aswan (2405N/3256E), in the Red Sea Hills or on the Red Sea coast south of Abu Ramad (2224N/3624E).

• FORECAST

Isolated adults are likely to persist near Lake Nasser. Low numbers of adults could appear on the southern coast of the Red Sea near Abu Ramad and breed if rainfall occurs.

Saudi Arabia

• SITUATION

No locusts were seen during surveys carried out on the Red Sea coastal plains and in the interior in October.

• FORECAST

Small-scale breeding could occur in areas of recent rainfall on the Red Sea coast between Qunfidah and Jizan, causing locust numbers to increase slightly.

Yemen

• SITUATION

During October, scattered solitary adults were present on the Gulf of Aden coastal plains between Aden (1250N/4503E) and Am Rija (1302N/4434E) and, to a lesser extent, on the Red Sea coastal plains between Hodeidah (1450N/4258E) and Midi (1619N/4248E). Small-scale breeding occurred near Aden where second and third instar solitary hoppers at densities up to 60 hoppers/site were seen at five places.

• FORECAST

Small-scale breeding is likely to occur on the Red Sea coastal plains and continue along the Gulf of Aden coast near Aden. There is a low risk that adults may appear in recently flooded areas in Hadhramaut and Mahara and perhaps breed on a small-scale. All efforts should be made to conduct surveys on a regular basis in all of these areas.

Oman

• SITUATION

No locusts were seen during surveys carried out in the north in October.

• FORECAST

There is a low risk that adults may appear in areas of recent rainfall in the centre and south, and perhaps breed on a small-scale. All efforts should be made to conduct surveys on a regular basis in these areas.

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

During October, scattered mature solitarious adults persisted seen at two places along the southeastern coast between Chabahar (2517N/6036E) and the Pakistani border. No locusts were seen near Jask (2540N/5746E).

• FORECAST

No significant developments are likely.

Pakistan

• SITUATION

Late reports indicated that small-scale breeding continued during September in Cholistan along the Indian border southeast of Bahawalpur (2924N/7147E) where first to fourth instar solitarious hoppers mixed with immature and mature adults were present.

During the first decade of October, a few isolated immature and mature solitarious adults persisted in the above areas.

• FORECAST

Locust numbers will continue to decline in Cholistan as vegetation dries out. No significant developments are likely.

India

• SITUATION

No locusts were seen during extensive surveys in Rajasthan and Gujarat in the first half of October.

• FORECAST

No significant developments are likely.

Afghanistan

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.



Announcements

Locust reporting. During recession periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During caution (yellow) and threat (orange) periods, 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). 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.

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.

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 (eclo@fao.org) for details.

MODIS imagery. Columbia University's International Research Institute for Climate and Society (IRI) provides 16-day 250-metre resolution 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. Comments and questions can be addressed to Pietro Ceccato (pceccato@iri.columbia.edu).

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

- **Desert Locust Bulletins.** Previous FAO bulletins dating from 1979 to the present (Archives section)
 - **National Locust Information Officer training.** An overview of the 11-month programme in DLIS (Activities – DLIS section)
 - **26th CRC session.** Final report in English and Arabic (Publications – Reports section)
- Links to the above information can be found in the *Latest Additions* section on Locust Watch.



No. 361

DESERT LOCUST BULLETIN



No. 361

DESERT LOCUST BULLETIN

2008-2009 events. The following activities are scheduled:

- **SWAC.** 26th Session, Kabul (15-17 December)
- **EMPRES/WR.** 7th Liaison Officers meeting, Niamey (15-19 December)
- **EMPRES/WR.** 4th Steering Committee meeting, Niamey (22-23 December)
- **DLCC.** 39th Session, Rome (10-13 March)



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.



No. 361

DESERT LOCUST BULLETIN

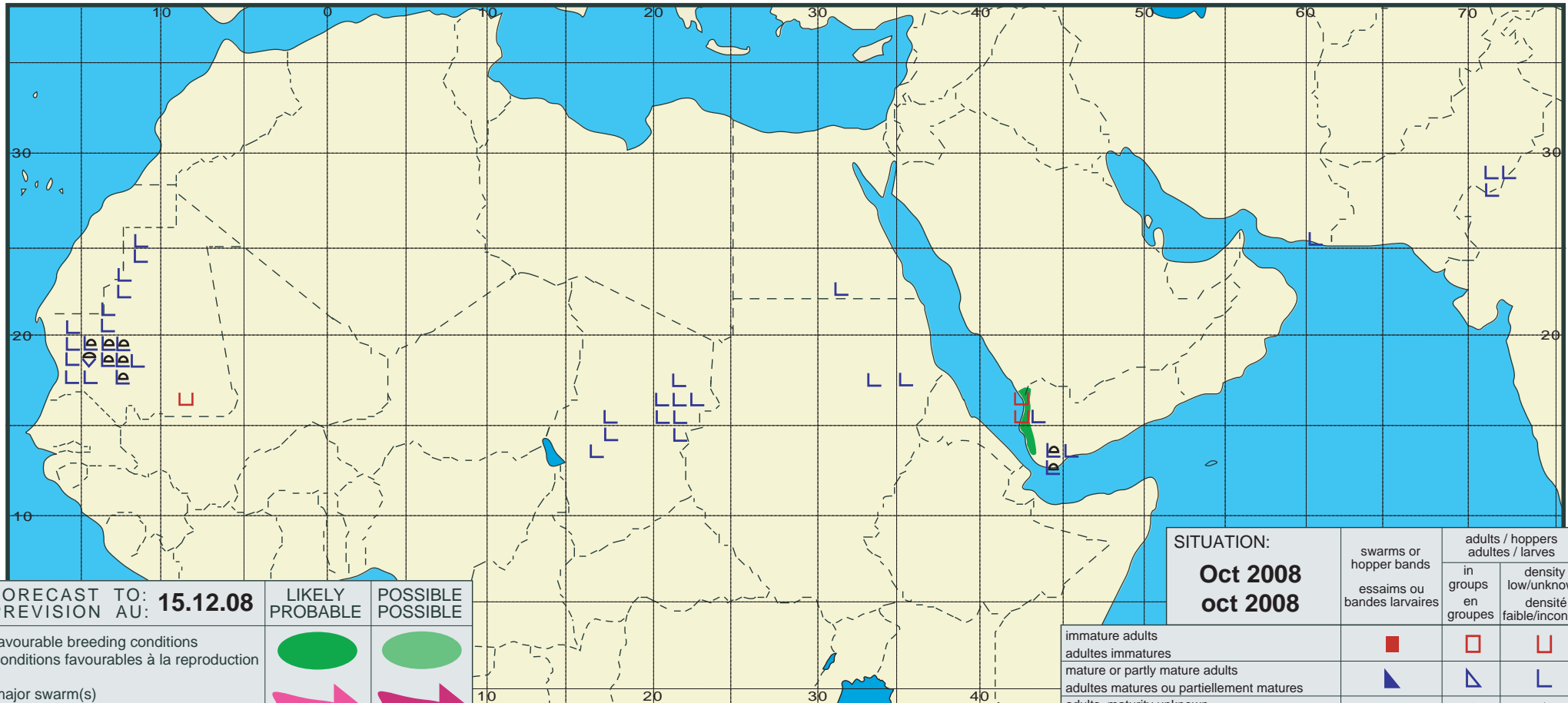
page **7** of 8



Desert Locust Summary

Criquet pèlerin - Situation résumée

361



FORECAST TO: PREVISION AU: 15.12.08	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 2008
oct 2008

	swarms or hopper bands	adults / hoppers adultes / larves	
	essaims ou bandes larvaires	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)			