

warning level: **CALM**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 384



**General Situation during September 2010
Forecast until mid-November 2010**

(4 October 2010)

The Desert Locust situation remained calm during September. Scattered adults were present throughout southern Mauritania and central Chad, and in parts of northern Mali and central Sudan. Small-scale breeding occurred, causing locust numbers to increase slightly in all areas. In South-West Asia, local breeding took place in Pakistan and India, and a few adult groups were treated near the Indian border in Pakistan. Although seasonal rains had nearly ceased by the end of September, breeding conditions remained favourable in the Sahel and along the Indo-Pakistan border. During the forecast period, locusts could increase rapidly in northwest Mauritania, and to a lesser extent in parts of northern Mali, Niger and Chad, concentrate in vegetation that remains green, and form small groups. Locusts may persist along the Indo-Pakistan border. All efforts should be made to conduct regular surveys to monitor the situation.

Western Region. Good rains fell during the first two decades of September in the summer breeding areas of the northern Sahel between Mauritania and Chad but declined thereafter. Low numbers of solitary adults were scattered throughout the summer breeding areas of southern Mauritania and central and eastern Chad. Small-scale breeding occurred in Mauritania, northern Mali and northeast Chad. Breeding is also likely to be in progress in northern Niger but surveys could not confirm this because of continued insecurity. As seasonal rains end and vegetation dries out, locusts are likely to concentrate

in vegetation that remains green, increase in density and perhaps form a limited number of groups, mainly in northwest Mauritania, northern Mali and Niger, and northeast Chad.

Central Region. Even though good rains fell during September for a third consecutive month in the summer breeding areas of northern Sudan, western Eritrea and the interior in Yemen, only low numbers of solitary adults were seen during surveys carried out in Sudan. A few hoppers and adults mixed with African Migratory Locusts were present in northern Somalia. During the forecast period, breeding will come to an end in the summer breeding areas and low numbers of adults are likely to move towards the winter breeding areas along the Red Sea coast in Sudan, Saudi Arabia and Yemen. No significant developments are likely.

Eastern Region. Good rains associated with the monsoon fell during the first half of September throughout the summer breeding areas along both sides of the Indo-Pakistan border. Low numbers of solitary adults were present between Tharparkar and Cholistan in Pakistan and, to a lesser extent, in Rajasthan, India. A few groups of adults were seen near the border in Pakistan where ground teams treated 900 ha. Small-scale breeding occurred in both countries. As the monsoon comes to an end and vegetation dries out, locusts are likely to concentrate along the border.

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 made available on the Internet.

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No. 384

DESERT LOCUST BULLETIN



Weather & Ecological Conditions in September 2010

Good rains fell for the third consecutive month throughout the summer breeding areas of the Sahel in West Africa and Sudan, and along the Indo-Pakistan border but declined in all areas at the end of September. Nevertheless, ecological conditions remained favourable for breeding.

In the **Western Region**, good rains fell during the first two decades of September in the summer breeding areas of the northern Sahel between Mauritania and Chad. During the first decade, widespread rains fell throughout southern, central, northwestern and northern areas in Mauritania (except in Hodh Gharbi), in northern Mali (Taoudenni, and Adrar des Iforas), in southern Algeria (along the Malian border), in northern Niger (Tamesna and the Air Mountains), and in eastern Chad. During the second decade, rains declined in all areas except in northern Chad where good rains fell between Kalait, Fada and Faya. Although very little rain during the last decade of the month, except for northwest Mauritania, ecological conditions remained favourable for local breeding in most places. Dry conditions prevailed in northwest Africa except in wadis near Tamanrasset, Algeria where ecological conditions were favourable for breeding.

In the **Central Region**, good rains fell in parts of the summer breeding areas and in some places along the Red Sea coast during September. In the summer breeding areas of the interior of Sudan, good rains fell in Khartoum and Kassala States but were poor in North Kordofan. Although rains had declined by the end of the month, vegetation remained green and breeding conditions continued to be favourable in most areas. Good rains also fell in the western lowlands of Eritrea, on the eastern side of the Red Sea along the southern coastal plains in Saudi Arabia and the Tihama in Yemen, and on the plateau of northern Somalia. However, rainfall in these areas was generally better during the first decade of the month except for the Tihama in Yemen where good rains fell in both the first and second decades.



Area Treated

Pakistan 900 ha (18-30 September)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During the first half of September, small-scale breeding occurred northwest of Tamcheppet (1714N/1040W) and between Aguilal Faye (1827N/1444W) and N'Beika (1758N/1215W) where isolated first to fourth instar solitarious hoppers and mature adults were present. During the second half of the month, isolated immature and mature solitarious adults were seen in more places west of N'Beika between Boutilimit (1732N/1441W), Nouakchott (1809N/1558W) and Akjoujt (1945N/1421W) while solitarious hoppers of all instars were present in only a few locations. Isolated immature and mature solitarious adults persisted east of Nema (1636N/0715W), northwest of Aioun El Atrous (1639N/0936W) and east of Tidjikja (1833N/1126W).

• FORECAST

As seasonal rains end and vegetation dries out in the south and southeast, adults will move towards the northwest and concentrate in the Aguilal Faye area where there is a low to moderate risk that locust numbers could increase rapidly and perhaps a few small groups could form.

Mali

• SITUATION

In early September, surveys were carried out in the Adrar des Iforas east of Aguelhoc (1927N/0052E) and north of Kidal (1827N/0125E) where isolated fourth and fifth instar solitarious hoppers and scattered immature and maturing solitarious adults, at densities of up to 100 adults/ha, were seen in a few places on

the 6-9th. Unfortunately, surveys had to be suspended due to insecurity.

• **FORECAST**

Small-scale breeding will continue in parts of the Adrar des Iforas, Tilemsi Valley, Timetrine and Tamesna where conditions remain favourable. Unless further rains occur, there is a low risk that adults could concentrate and form small groups in some areas as vegetation dries out.

Niger

• **SITUATION**

No locusts were reported during September.

• **FORECAST**

Small-scale breeding will continue in parts of Tamesna where conditions remain favourable. Unless further rains occur, there is a low risk that adults could concentrate and form small groups in some areas as vegetation dries out.

Chad

• **SITUATION**

During September, isolated immature and mature solitary adults were mainly present in BET between Kalait (1550N/2054E), Fada (1714N/2132E) and Faya (1756N/1907E), and to a lesser extent further south in eastern Kanem near Salal (1448N/1712E), throughout Batha, and in Biltine near Abeche (1349N/2049E). Egg laying was reported near Kalait on 8 September.

• **FORECAST**

Small-scale breeding will cause locust numbers to increase in BET and, to a lesser extent, in parts of Kanem, Batha and Biltine. Hatching is expected to occur during October and fledging by the end of the forecast period. Unless further rains occur, there is a low risk that adults could concentrate and form small groups in some areas as vegetation dries out.

Senegal

• **SITUATION**

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

• **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 September near Adrar (2753N/0017W) and Tamanrasset (2250N/0528E).

• **FORECAST**

Scattered adults are likely to be present and breeding in the extreme south near the Malian border, causing locust numbers to increase. Once rains come to an end and vegetation starts to dry out, there is a low risk that adults could concentrate and form small groups in some areas.

Morocco

• **SITUATION**

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

• **FORECAST**

Low numbers of solitary adults may appear in the southern portion of Western Sahara.

Libyan Arab Jamahiriya

• **SITUATION**

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

• **FORECAST**

Low numbers of locusts are likely to be present in parts of the southwest near Ghat.

Tunisia

• **SITUATION**

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

• **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

• **SITUATION**

During September, scattered immature solitary adults at densities of 50-150 adults/ha were seen at a few places in Khartoum State northwest of Khartoum (1533N/3235E). No locusts were seen during surveys carried out in White Nile and River Nile states.

• **FORECAST**

Small-scale breeding will decline in West and North Darfur, West and North Kordofan, White Nile, River Nile, Northern and Kassala states as summer rains end and vegetation starts to dry out. By the end of the forecast period, a few adults are likely to appear in the winter breeding areas on the Red Sea coast.



No. 384



No. 384

DESERT LOCUST BULLETIN

Eritrea

- SITUATION

No reports were received during September.

- FORECAST

Scattered adults are almost certainly present and breeding in the summer breeding areas of the western lowlands. Breeding should come to an end by November and a few adults are likely to appear in the winter breeding areas on the central and northern Red Sea coast.

Ethiopia

- SITUATION

No locusts were seen during surveys carried out near Dire Dawa (0935N/4150E) during the first half of September.

- FORECAST

Low numbers of adults are expected to persist and mature near Ayasha where they could eventually breed on a small scale if conditions remain favourable.

Djibouti

- SITUATION

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

- FORECAST

No significant developments are likely.

Somalia

- SITUATION

During September, fourth to sixth instar solitary hoppers, fledglings and immature adults mixed with African Migratory Locusts were seen about 40 km northeast of Erigavo (1040N/4720E) at Jiidale (1041N/4739E) during surveys carried out in the area on the 17-23rd.

- FORECAST

Low numbers of solitary adults are likely to persist and breed on a small scale in parts of the plateau between Boroma and Burao, causing locust numbers to increase slightly during the forecast period.

Egypt

- SITUATION

No reports were received during September.

- FORECAST

No significant developments are likely.

Saudi Arabia

- SITUATION

During September, no locusts were seen during surveys carried out on the Red Sea coast near Jeddah (2130N/3910E), in the Asir Mountains near Khamis Mushait (1819N/4245E), and in the interior near Buraydah (2621N/4358E).

- FORECAST

Scattered adults may appear in areas of recent rainfall on the Red Sea coast. No significant developments are likely.

Yemen

- SITUATION

In early September, isolated adults were reported in a few places of the interior near Marib (1527N/4519E) and Shabwah (1522N/4700E) but this could not be confirmed by surveys due to insecurity.

- FORECAST

Small-scale breeding is likely to occur in parts of the interior between Marib, Ataq and Wadi Hadhramaut. Low numbers of adults may be present in areas of recent rainfall on the Red Sea and Gulf of Aden coasts.

Oman

- SITUATION

No locusts were seen during surveys in Dakhliya and no locusts were reported in the other regions during September.

- FORECAST

There remains a low risk of small-scale breeding in those areas of Sharqiya that received heavy rainfall from Cyclone Phet in June. Regular monitoring is recommended.

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 September, no locusts were seen during surveys carried out on the southeastern coast near Jask (2540N/5746E) and in the western Jaz Murain Basin near Kahnuj (2757N/5742E).

- FORECAST

No significant developments are likely.

Pakistan

- SITUATION

During the second half of August, small-scale breeding continued in Cholistan east of Rahimyar

Khan (2822N/7020E) near the Indian border and there was an increase in the number of locations reporting mature solitary adults. Most of the adults were present along the border in Cholistan, at densities up to 80 adults/ha. Small-scale breeding also occurred at two places near Uthal (2548N/6637E).

During the first half of September, more locusts were seen mainly in Cholistan where mature solitary adults, at densities up to 125 adults/ha, were reported from 86 places along the Indian border between Rahimyar Khan and Bahawalpur (2924N/7147E), at 11 places south of Sukkur (2742N/6854E), and 3 places near Uthal. On the 15-19th, a few small groups of mature adults appeared just inside the border in the Ghotki district near Pir Jatmal (2726N/6948E). The groups dispersed quickly to lay eggs. Ground control operations treated 900 ha from 18-30 September.

- **Forecast**

Breeding will end and locust numbers will decline as monsoon rains cease and vegetation dries out in the summer breeding areas in Cholistan, Khairpur and Tharparkar. Low numbers of locusts are likely to concentrate in areas that remain green.

India

- **SITUATION**

During September, scattered solitary hoppers and immature and mature adults were present in Rajasthan between Barmer and Bikaner. Most of the infestations were along the Pakistani border north of Jaisalmer (2652N/7055E) where adults were copulating and laying eggs.

- **FORECAST**

Breeding will end and locust numbers will decline as monsoon rains cease and vegetation dries out in the summer breeding areas in Rajasthan and Gujarat.

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/ECLD Desert Locust Information Service (eclod@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 site. FAO DLIS has created a Google site (<https://sites.google.com/site/faodlis>) for national locust information officers to share problems, solutions and tips in using new technologies (eLocust2, eLocust2Mapper, RAMSES, remote sensing) and to make available the latest files for downloading. The site replaces the FAODLIS Google group, which will no longer be maintained. Interested users should contact Keith Cressman (keith.cressman@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.ideo.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 (www.fao.org/ag/locusts) are:

- **2010 Iran/Pakistan Joint Survey report.** Publications Section – Reports
- **Desert Locust situation updates.** Archives Section – Briefs
- **Desert Locust risk map update.** Archives Section – Risk maps



No. 384

DESERT LOCUST BULLETIN



No. 384

DESERT LOCUST BULLETIN

2010-11 events. The following activities are scheduled or planned:

- **EMPRES/WR.** Desert Locust Master Trainers (Survey) regional workshop, Mauritania (18-28 Oct)
- **SWAC.** 27th session, Islamabad, Pakistan (14-16 Dec)
- **EMPRES/WR.** 6th Steering Committee meeting and 9th EMPRES Liaison Officers meeting, Tripoli, Libya (Dec)
- **DLCC.** 40th session, Cairo, Egypt (6-10 Mar)



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. 384

DESERT LOCUST BULLETIN

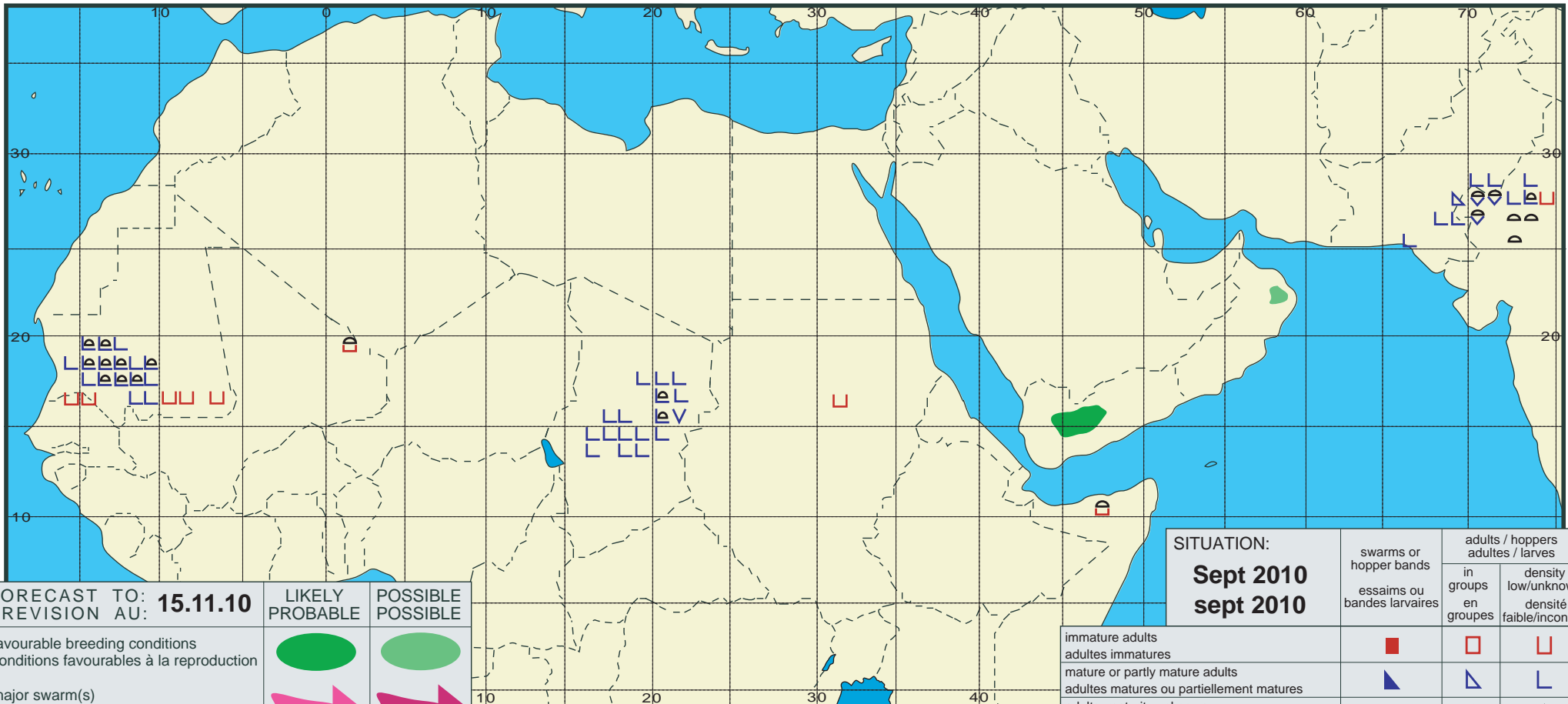
page 7 of 8



Desert Locust Summary

Criquet pèlerin - Situation résumée

384



FORECAST TO: PREVISION AU: 15.11.10	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: Sept 2010 sept 2010	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)			