

warning level: **CALM**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 396



**General Situation during September 2011
Forecast until mid-November 2011**

(3 Oct 2011)

The Desert Locust situation remained calm during September. Despite poor rains in most of the summer breeding areas in the northern Sahel of West Africa and Sudan, small-scale breeding occurred in a few places but locust numbers remained low. During the forecast period, small-scale breeding will occur in northern Chad where good rains fell in September. Breeding will decline in Mauritania, Mali and Niger, and adults are likely to concentrate in those few areas that remain green. Good rains fell on the Red Sea coast of Yemen where scattered adults are probably present and may breed during the next few months. In southeast Pakistan, very heavy rains and floods occurred for the second consecutive month. Only low numbers of adults were present along both sides of the Indo-Pakistan border where limited breeding took place. Breeding will end in India but may occur and continue for several months once floodwaters recede in Pakistan.

Western Region. Seasonal rains were poor and lower than normal in the summer breeding areas of the northern Sahel in **Mauritania, Mali and Niger** during September. Consequently, only low numbers of solitary adults were present in parts of southern, central and western Mauritania. Breeding occurred in a few places but on a much smaller scale than in most years at this time. A similar situation was present in northern Mali and Niger although regular surveys were limited by persistent insecurity. On the

other hand, good rains fell in the summer breeding areas in northern **Chad** where small-scale breeding was probably underway but surveys were not carried out to confirm this. During the forecast period, small-scale breeding will occur mainly in Chad and, to a lesser extent, in the other countries. As vegetation dries out, adults are likely to concentrate in western Mauritania, in northern Mali (Adrar des Iforas) and in Niger (Tamesna and western Air Mountains). In Northwest Africa, isolated adults were present in northeast **Morocco** in early September. No locusts were reported elsewhere in the Region.

Central Region. Desert Locust numbers remained low in the summer breeding areas of **Sudan** due to poor rainfall in September. Only scattered solitary adults were seen in a few places. No locusts were seen in the western lowlands of **Eritrea**. Nevertheless, small-scale breeding will continue during the forecast period, causing locust numbers to increase slightly in both countries. By mid-November, breeding is likely to come to an end and low numbers of adults will start to move towards the Red Sea coastal plains. Good rains fell on the Red Sea coast in **Yemen** where scattered adults are probably present, but surveys could not be carried out to confirm this. During the forecast period, small-scale breeding is expected to occur on the coast, causing locust numbers to increase slightly. Locusts may appear and also breed in adjacent southern coastal areas in **Saudi Arabia**. No locusts were reported elsewhere in the Region.

Eastern Region. Low numbers of solitary adults persisted along both sides of the Indo-Pakistan border in Cholistan, **Pakistan** and Rajasthan, **India**, as breeding conditions remained favourable from the monsoon rains. Small-scale breeding was detected in Cholistan. Very heavy rains and floods occurred for the second consecutive month in Tharparkar Desert, Pakistan. Once the floodwaters recede, breeding conditions are expected to remain favourable for a

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number of months and much longer than in most years. No locusts were reported in **Iran**.



Weather & Ecological Conditions in September 2011

Good rains fell in the summer breeding areas in Chad and Eritrea but were poor in Mauritania, Mali, Niger and Sudan. Very heavy rains and flooding occurred in Tharparkar Desert, Pakistan.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) remained stationary during September over the northern Sahel in West Africa, oscillating around 18N over Mauritania and 16-17N over Mali, Niger and Chad. In Mauritania, light rains fell in parts of the summer breeding areas in the south, mainly during the second decade in Trarza and Brakna, but the distribution and quantity of rain during September were much poorer than in most years. In Mali, very little rain fell in the northeast (Timetrine, Tilemsi Valley, Adrar des Iforas, northern Tamesna) except for light showers south of Kidal and in a few places between Aguelhoc and the Algerian border between Timeiaouine and Bir Bou Mokhtar. Similarly, very little rain occurred in the summer breeding areas of the Tamesna in northern Niger. Most of the rain fell south of Tassara and Agadez, and in parts of the Air Mountains between Arlit and Iferouane. As a result of the poor rainfall, ecological conditions were less favourable than normal in the summer breeding areas in Mauritania, Mali and Niger. In Chad, moderate showers fell during the second decade in Kanem, Batha and in the northeast as far north as Kalait. Ecological conditions were favourable for breeding in most areas. In Northwest Africa, dry conditions persisted in Morocco except in a few places near Bouarfa where small patches of green vegetation were present. In Algeria, annual vegetation was becoming green in some places along the Malian border from recent rains.

In the **Central Region**, the ITCZ position over Sudan during September was further south than normal, causing lower than average rainfall in the summer breeding areas. Nevertheless, light rains did fall in parts of North Darfur, North Kordofan (south

of Abu Uruq), White Nile, Khartoum and Kassala States. Rainfall declined during the last decade in Darfur and Kordofan. In Eritrea, good rains fell in the western lowlands. Consequently, ecological conditions were favourable for breeding in both countries. In the Horn of Africa, light to moderate showers fell at times in eastern Ethiopia (Dire Dawa and Jijiga) and on the plateau in northwest Somalia. Good rains fell throughout the month on the Red Sea coast in Yemen, and at times on the coast of Saudi Arabia near Qunfidah and Jizan. As a result, ecological conditions were probably favourable for breeding in Yemen. Dry conditions prevailed in Oman.

In the **Eastern Region**, unusually heavy rains and flooding occurred in early September in the Tharparkar Desert of Pakistan where very heavy rains had fallen in August. Good rains associated with the monsoon continued to fall along both sides of the Indo-Pakistan border until the third decade of the month. Once the floodwaters recede in Tharparkar, breeding conditions are expected to remain favourable for a number of months and much longer than in most years.



Area Treated

No control operations were reported during September.



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During September, isolated mature solitary adults were present in the south between Tamcheppet (1714N/1040W) and Nema (1636N/0715W), in the centre between Tidjikja (1833N/1126W) and Nouakchott (1809N/1558W), in the southwest near Rkiz (1658N/1514W), and in the northwest near Akjoujt (1945N/1421W). Small-scale breeding occurred near Nema and in Trarza but locust numbers remained low.

• FORECAST

Small-scale breeding will continue in areas of recent rainfall in the south, centre, southwest and northwest, causing locust numbers to increase slightly but remain below threatening levels. As vegetation dries out, locusts will concentrate in areas that remain green. A gradual shift of populations from the southeast to the northwest is expected to occur.

Mali

• SITUATION

During the first half of September, scattered immature and mature solitary adults were seen during ground surveys in Timetrine west of Aguelhoc (1927N/0052E) and in the Adrar des Iforas from Kidal (1827N/0125E) to the Algerian border. Copulating adults, at densities up to 700 adults/ha, were seen at one place in Timetrine on the 12th.

• FORECAST

Small-scale breeding will cause locust numbers to increase in the Tilemsi Valley, Adrar des Iforas, Tamesna and Timetrine. As vegetation dries out, adults are likely to concentrate and may form a few small groups.

Niger

• SITUATION

During September, small-scale breeding occurred on the central Tamesna Plains from In Abangharit (1754N/0559E) to the western side of the Air Mountains where isolated immature and mature solitary adults were present mixed with isolated hoppers. In the southeast, a similar situation was also reported northeast of Diffa (1318N/1236E) in the Lake Chad basin. No locusts were seen in the southern Air Mountains south of Timia (1809N/0846E).

• FORECAST

Small-scale breeding will continue in Tamesna, causing locust numbers to increase slightly.

Chad

• SITUATION

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

• FORECAST

Small-scale breeding will cause locust numbers to increase in the northern parts of Kanem, Batha and Biltine as well as in parts of BET in areas of recent rainfall and green vegetation.

Senegal

• SITUATION

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

• FORECAST

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

Morocco

• SITUATION

During the first decade of September, isolated immature solitary adults were present at four places in the northeast between Bouarfah (3232N/0159W) and Figuig (3207N/0113W).

• FORECAST

No significant developments are likely.

Libyan Arab Jamahiriya

• SITUATION

No reports were received during September.

• FORECAST

A few solitary adults may be present and could persist near Ghat. No significant developments are likely.

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 and mature solitary adults at densities up to 200 adults/ha were present in North Kordofan between Sodiri (1423N/2906E) and Umm Saiyala (1426N/3112E), in River Nile State near Ed Damer (1734N/3358E), and in Kassala State northwest of Kassala (1527N/3623E) and near Derudeb (1731N/3607E). No locusts were seen in the Baiyuda Desert.

• FORECAST

Small-scale breeding will continue in parts of North Darfur, North Kordofan, White Nile, River Nile, Northern, Kassala and Red Sea states but will be



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difficult to detect due to low numbers of locusts. By the end of the forecast period, breeding is likely to come to an end and low numbers of adults will start to move towards the Red Sea coastal plains.

Eritrea

• SITUATION

No locusts were seen during a survey in the western lowlands on 16-20 September.

• FORECAST

As small-scale breeding is almost certainly in progress in areas of recent rainfall in parts of the western lowlands, locust numbers will increase slightly along Khor Baraka. By the end of the forecast period, breeding is likely to come to an end and low numbers of adults will start to move towards the Red Sea coastal plains.

Ethiopia

• SITUATION

No locusts were seen during surveys in the northern regions of Amhara and Tigray during September.

• FORECAST

No significant developments are likely.

Djibouti

• SITUATION

No reports were received during September.

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

No locusts were seen during surveys carried out on 5-10 September along the plateau, escarpment and coastal plains in the northwest.

• FORECAST

No significant developments are likely.

Egypt

• SITUATION

No locusts were seen during surveys carried out in September on the Red Sea coast between Shalaty (2308N/3535E) and the Sudanese border and on the western side of Lake Nasser between Abu Simbel (2219N/3138E) and Tushka (2247N/3126E).

• FORECAST

No significant developments are likely.

Saudi Arabia

• SITUATION

During September, no locusts were seen during surveys carried out near Mecca (2125N/3949E) and in the interior north of Riyadh (2439N/4646E).

• FORECAST

No significant developments are likely.

Yemen

• SITUATION

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

• FORECAST

Scattered adults may be present and breeding on small scale in areas of recent rainfall on the Red Sea coast. This is likely to continue during the forecast period.

Oman

• SITUATION

No locusts were seen during surveys carried out in Dhofar, Dakhliya and Batinah regions in September. No locusts were reported elsewhere.

• FORECAST

No significant developments are likely.

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 a survey on the southeastern coast near Jask (2540N/5746E) and Chabahar (2517N/6036E) in September.

• FORECAST

No significant developments are likely.

Pakistan

• SITUATION

During the second fortnight of August, isolated mature solitary adults persisted in Cholistan and Tharparkar deserts.

During the first fortnight of September, isolated mature solitary adults were present on the coast west of Karachi near Uthal (2548N/6637E), and persisted at a few places along the Indian border in Cholistan. The situation remained the same during the second fortnight, except that isolated third instar solitary hoppers were seen at one place in Cholistan near the Indian border.

- Forecast

Small-scale breeding will continue along the Indian border in Cholistan, Khaipur and Tharparkar deserts, causing locust numbers to increase slightly. There is a risk of prolonged breeding in Tharparkar as floodwaters recede.

India

- SITUATION

During September, isolated immature and mature solitary adults were present in Rajasthan between Phalodi (2706N/7222E), Bikaner (2801N/7322E) and the Pakistani border. No locusts were seen elsewhere during surveys undertaken in Rajasthan and Gujarat.

- FORECAST

Small-scale breeding will cause locust numbers to increase slightly in Rajasthan but is expected to finish by the end of the forecast period.

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 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).

Greenness maps. Geo-referenced dynamic greenness maps that show the evolution of green vegetation in the Desert Locust recession area for three months can be downloaded every ten days from DevCoCast (<http://www.devcoCast.eu/user/images/dl/Form.do>). The new product was developed by the Université catholique de Louvain and the Flemish Institute for Technical Research (VITO) in Belgium and funded by the Belgium Science Policy Office. The maps can be used in a GIS to help guide survey teams and in locust analysis and forecasting.

Twitter. FAO DLIS disseminates updates on the Desert Locust situation via Twitter, a social media service. The updates can be followed on some mobile phones in some countries (send an SMS to 40404: 'Follow faolocust' (no quotes) and through the Internet (<http://twitter.com/faolocust>) by searching on 'DesertLocust'.

eLERT. The Locust Group has created a dynamic and interactive online reference database that can be used to respond to assistance needs in a fast evolving locust emergency. It provides information on pesticides, equipment, suppliers, environmental



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monitoring, contracts, and contacts. The eLERT should help agencies to act more effectively in coping with locust threats. Visit eLERT at <http://sites.google.com/site/elertsite>.

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

- **Desert Locust situation updates.** Archives Section – Briefs
- **Desert Locust risk map.** Archives Section – Risk maps
- **Summer 2011 forecast.** Home page

2011 events. The following activities are scheduled or planned:

- **EMPRES/WR** Contingency Planning Simulation Exercise, Bamako, Mali (17-21 October)
- **EMPRES/WR.** 10th Liaison Officer meeting, N'Djamena, Chad (12-16 December)
- **EMPRES/WR.** 7th Consultative Committee meeting, N'Djamena, Chad (19-20 December)
- **DLCC.** 40th session, Cairo, Egypt (to be confirmed)



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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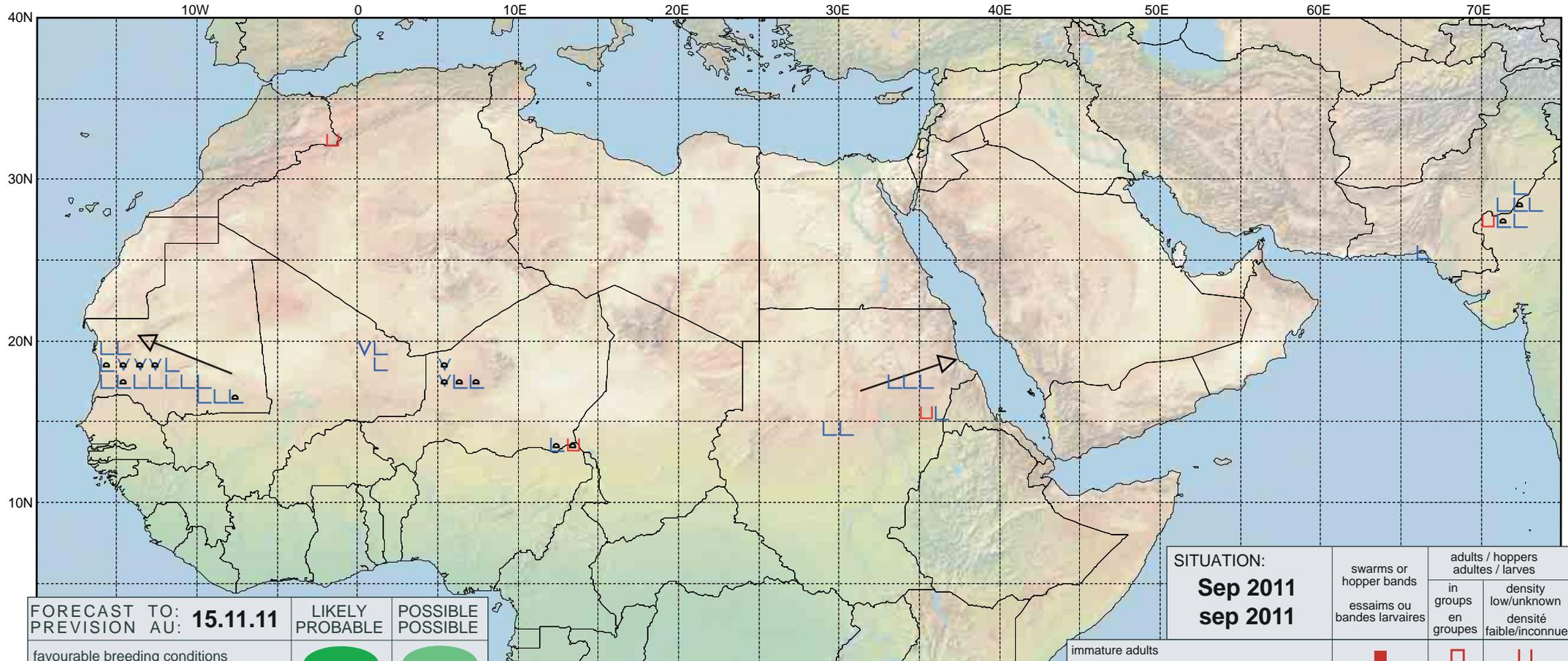
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Desert Locust Summary

Criquet pèlerin - Situation résumée



FORECAST TO: PREVISION AU: 15.11.11	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: Sep 2011 sep 2011	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)			