

warning level: **CALM**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 397



**General Situation during October 2011
Forecast until mid-December 2011**

(3 Nov 2011)

The Desert Locust situation remained calm during October due to unusually poor rainfall in the summer breeding areas of the northern Sahel in West Africa and Sudan, and an early end to monsoon rains along the Indo-Pakistan border. Nevertheless, small-scale breeding occurred in western Mauritania and on the coast in Pakistan, and scattered adults were present in Mauritania, Mali, Niger, Chad, Sudan and Pakistan. Limited ground control operations were carried out in southeastern Mauritania and northern Mali. In general, locust numbers were much lower this year at the end of the summer breeding period than in previous years. During the forecast period, low numbers of adults will shift from the summer breeding areas to northwest Mauritania and to the winter breeding areas along both sides of the Red Sea. Small-scale breeding will occur in these areas once the winter rains fall.

Western Region. No significant rain fell during October in the summer breeding areas of the northern Sahel. Consequently, only low numbers of solitary adults were present in parts of Mauritania, northern Mali, Niger and Chad. Small-scale breeding occurred in western Mauritania. Ground teams treated 1,200 ha of adult groups in northern Mali and 60 ha of solitary adults in southeast Mauritania. During the forecast period, low numbers of adults will move from southern Mauritania to the northwest of the country where there is a risk that higher than normal rain may fall during November. If this occurs, small-scale

breeding will take place, causing locust numbers to increase. Elsewhere, scattered adults may persist in parts of northern Mali, Niger and Chad. In Northwest Africa, no locusts were reported in October. During the forecast period, scattered adults may appear in the **Western Sahara** and breed if rainfall occurs. Small-scale breeding could also take place in areas of recent rainfall in the central Sahara of eastern **Algeria** and southwestern **Libya**.

Central Region. Locust numbers continued to remain low in the summer breeding areas of **Sudan** due to poor rainfall for a second consecutive month. Only scattered solitary adults were seen in a few places. Although locusts have not been seen so far in the winter breeding areas along the Red Sea coastal plains in Sudan and **Eritrea**, scattered adults are expected to appear and breed on a small scale with the onset of the winter rains. Small-scale breeding is also likely during the forecast period on the Red Sea coast in **Yemen** and **Saudi Arabia**. No locusts were reported elsewhere in the region.

Eastern Region. Locust numbers declined in the summer breeding areas along both sides of the Indo-Pakistan border in Cholistan, **Pakistan** and Rajasthan, **India** as no further monsoon rains fell and vegetation was drying out in October. Small-scale breeding occurred on the coast west of Karachi but locust numbers remained low. There remains a low risk of potential breeding in Tharparkar Desert of southeast Pakistan where heavy rains and floods occurred in August and September. No locusts were reported in **Iran**. No significant developments are expected during the forecast period.

The FAO Desert Locust Bulletin is issued every month by the Desert Locust Information Service, AGP Division (Rome, Italy). It is supplemented by Alerts and Updates during periods of increased Desert Locust activity. All products are distributed by e-mail and made available on the Internet.

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Weather & Ecological Conditions in October 2011

As a result of poor rainfall, unusually dry conditions prevailed in the summer breeding areas in the northern Sahel of West Africa and Sudan as well as along both sides of the Indo-Pakistan border. Consequently, vegetation was drying out in all areas.

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) shifted southwards beyond the summer breeding areas during October. Its mean position remained south of 14N, which is nearly 250 km further south than normal for this time of year. As a result, very little rain fell in the summer breeding areas during October. In Mauritania, light rain fell in Trarza and between Akjoujt and Zouerate on 1-2 October. Light rainfall may also have occurred in parts of Inchiri, Dakhlet Nouadhibou and southern Tiris-Zemmour at times during the second half of the month. In Mali, light rain may have fallen in the northwest near Taoudenni during the first half of October. No rain was reported in the Adrar des Iforas where only about half of the amount of rain has fallen this summer compared to last year. In Niger, light rain fell in eastern Tamesna and in the Air Mountains in early October. In eastern Chad, rains remained south of Abeche. Consequently, annual vegetation was drying out in all of the summer breeding areas of the northern Sahel from Mauritania to Chad, and ecological conditions were less favourable than normal. In Northwest Africa, light rains may have fallen at times over parts of the central Sahara between In Salah, Algeria and Wadden, Libya.

In the **Central Region**, the ITCZ position over Sudan and Eritrea shifted southwards outside of the summer breeding areas during October. Similar to the Western Region, its mean position was further south than in most years. Consequently, no significant rain fell in the summer breeding areas of both countries and annual vegetation was drying out. In the winter breeding areas along both sides of the Red Sea, light rain fell at times on the Tihama coast of Yemen and along parts of the coast in Saudi Arabia near Qunfidah and Jizan. Ecological conditions were favourable for

breeding in Yemen and were expected to be improving in Saudi Arabia. No significant rain fell in northern Somalia or eastern Ethiopia where drought conditions prevailed. In northern Oman, light rain fell in some places of the interior between Ibra and Buraimi during the second week of October but breeding conditions remained unfavourable.

In the **Eastern Region**, no significant rain fell during October. In the summer breeding areas, vegetation was drying out along both sides of the Indo-Pakistan border except in the Tharparkar Desert of Pakistan where heavy rains and flooding occurred in August and September. In the spring breeding areas of southeastern Iran, light rains fell in the Jaz Murian Basin on 11 October but vegetation remained dry.



Area Treated

Mali	1,200 ha (8-12 October)
Mauritania	60 ha (October)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

During October, immature and mature solitary adults persisted in the south between Tamchekket (1714N/1040W) and Nema (1636N/0715W), in the centre between Tidjikja (1833N/1126W) and Nouakchott (1809N/1558W), and in the southwest near Rkiz (1658N/1514W). Locust densities were less than 700 adults/ha. Small-scale breeding occurred in eastern Trarza, northern Brakna and western Tagant where isolated solitary hoppers of all instars were present between Aguilal Faye (1827N/1444W) and Tidjikja. Locust numbers increased slightly in the northwest (Inchiri and southwest Adrar) where scattered immature and mature solitary adults were present between Bennichab (1932N/1512W) and Oujefft (2003N/1301W). Limited breeding occurred southwest of Oujefft.

• FORECAST

Locust numbers will decline in the southwest and centre as adults move towards the northwest. There is a risk that higher than normal rains may fall during November in northern Trarza, Inchiri and southwest Adrar. If this occurs, small scale breeding will take place, causing locust numbers to increase.

Mali

• SITUATION

During October, immature solitary and *transiens* adults were forming small groups at two locations in Timetrine east of Ti-n-kar (1926N/0022W) where breeding was reported in September. Ground teams treated 1,200 ha on 8-12 October.

• FORECAST

Unless further rains fall, locust numbers will decline as vegetation dries in the Tilemsi Valley, Adrar des Iforas, Tamesna and Timetrine. Adults are expected to concentrate in any vegetation that remains green.

Niger

• SITUATION

During October, scattered immature solitary adults were present at a few places in the Tadres area southeast of In Gall (1651N/0701E).

• FORECAST

Locust numbers will decline in Tamesna and Tadres as vegetation continues to dry out. No significant developments are likely.

Chad

• SITUATION

During October, isolated immature and mature solitary adults were scattered in parts of Kanem between Mao (1406N/1511E) and Salal (1448N/1712E), in Batha between Haraz-Djombo (1357N/1926E) and Beurkia (1523N/1800E), and in the east from Abeche (1349N/2049E) to Fada (1714N/2132E). Small-scale breeding may have occurred in a few of these places.

• FORECAST

Locust numbers will decline in Kanem, Batha and the east as vegetation continues to dry out. No significant developments are likely.

Senegal

• SITUATION

No surveys were carried out and no locusts were reported 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

During October, no locusts were seen in the central Sahara near Adrar (2753N/0017W) and in the south near Tamanrasset (2250N/0528E).

• FORECAST

Low numbers of adults are likely to be present in the southern and eastern Sahara and breeding on a small scale in areas of recent rainfall.

Morocco

• SITUATION

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

• FORECAST

Scattered adults may appear in the extreme south of the Western Sahara and breed on a small scale if rainfall occurs.

Libyan Arab Jamahiriya

• SITUATION

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

• FORECAST

A few solitary adults may be present and breeding in areas of recent rainfall in the southwest near Ghat. 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, scattered mature solitary adults at densities up to 150 adults/ha were seen in a few places in River Nile State near Abu Hamed (1932N/3320E) and Atbara (1742N/3400E), and in Kassala State between Kassala (1527N/3623E) and Derudeb (1731N/3607E). No locusts were seen during surveys in North Kordofan and in the winter breeding areas along the southern Red Sea coastal plains between Suakin (1906N/3719E) and the Eritrean border, and in the Red Sea Hills near Tomala (2002N/3551E).

• FORECAST

Locust numbers will decline in the summer breeding area as adults move towards the winter breeding areas along the Red Sea coast. This movement will



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be limited and consist of scattered solitary adults. Small-scale breeding will occur on the Red Sea coastal plains once seasonal rains commence.

Eritrea

• SITUATION

During October, no locusts were seen during a survey along the central Red Sea coastal plains from south of Massawa (1537N/3928E) to Embere (1628N/3856E).

• FORECAST

Locust numbers will decline in the summer breeding area as adults move towards the winter breeding areas along the Red Sea coast. This movement will be limited and consist of scattered solitary adults. Small-scale breeding will occur on the Red Sea coastal plains once seasonal rains commence.

Ethiopia

• SITUATION

No locusts were seen during surveys in the northern regions of Amhara and Tigray and in the eastern region of Somali during October.

• FORECAST

No significant developments are likely.

Djibouti

• SITUATION

No reports were received during October.

• FORECAST

No significant developments are likely.

Somalia

• SITUATION

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

• FORECAST

No significant developments are likely.

Egypt

• SITUATION

During October, no locusts were seen during surveys carried out on the Red Sea coast near Shalatyn (2308N/3535E) and Abu Ramad (2224N/3624E), on the western shore of Lake Nasser between Abu Simbel (2219N/3138E) and Tushka (2247N/3126E), and on the eastern side of the lake.

• FORECAST

No significant developments are likely.

Saudi Arabia

• SITUATION

During October, no locusts were seen during surveys carried out in the interior between Riyadh (2439N/4646E) and the Iraqi border, and in the Asir Mountains near Khamis Mushait (1819N/4245E).

• FORECAST

Low numbers of adults may appear on the central and southern Red Sea coastal plains. Small-scale breeding is likely to take place in areas of recent rainfall near Qunfidah and Jizan, and elsewhere if rains fall during the forecast period.

Yemen

• SITUATION

No reports were received during October.

• 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 the Buraimi region in October. 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

During October, no locusts were seen during surveys on the southeastern coast near Jask (2540N/5746E) and Chabahar (2517N/6036E).

• FORECAST

No significant developments are likely.

Pakistan

• SITUATION

During the first fortnight of October, isolated mature solitary adults persisted at a few places along the Indian border in Cholistan, in Ghotki District east of Rohri (2739N/6857E), and on the coast west of Karachi near Uthal (2548N/6637E). Undetected small-scale laying occurred in the Uthal area where isolated

first to fourth instar solitarious hoppers were present. Isolated mature solitarious adults persisted in these areas during the remainder of the month.

- **Forecast**

Although locust numbers will decline in the summer breeding areas of Cholistan and Khairpur deserts, there remains a low risk of prolonged breeding in Tharparkar where heavy rains and floods occurred in August and September. Low numbers of adults may persist near Uthal.

India

- **SITUATION**

During the first fortnight of October, no locusts were seen during surveys carried out in Rajasthan and Gujarat. During the second fortnight, isolated mature solitarious adults were present at one place southwest of Bikaner (2801N/7322E).

- **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 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.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).

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.devcoast.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



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Glossary of terms

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The following special terms are used in the Desert Locust Bulletin when reporting locusts:

be used to respond to assistance needs in a fast evolving locust emergency. It provides information on pesticides, equipment, suppliers, environmental 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>.

EMPRES – Plant Pests group. Effective 1 October, Dr. Annie Monard has been appointed Senior Officer (Transboundary Plant Pests) and Team Leader of the Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases (EMPRES) group, AGPMM. She replaces Christian Pantenius who retired in August 2011.

CRC Secretary. Effective 1 November, Mr. Mamoon Al-Alawi replaced Dr. Munir Butrous (who retired in April 2011) as the CRC secretary. His office is at the FAO Near East Regional Office in Cairo, and he can be contacted by email (Mamoon.AAlawi@fao.org) and telephone (+20 2 33316018).

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

2011-12 events. The following activities are scheduled or planned:

- **FAO Council.** 143rd session, Rome (28 November – 2 December)
- **EMPRES/WR.** 10th Liaison Officer meeting, N'Djamena, Chad (12-16 December)
- **EMPRES/WR.** 7th Consultative Committee meeting, N'Djamena, Chad (19-20 December)
- **CLCPRO.** 6th session, Tunis, Tunisia (26-31 March)
- **DLCC.** 40th session, Cairo, Egypt (to be confirmed)

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.



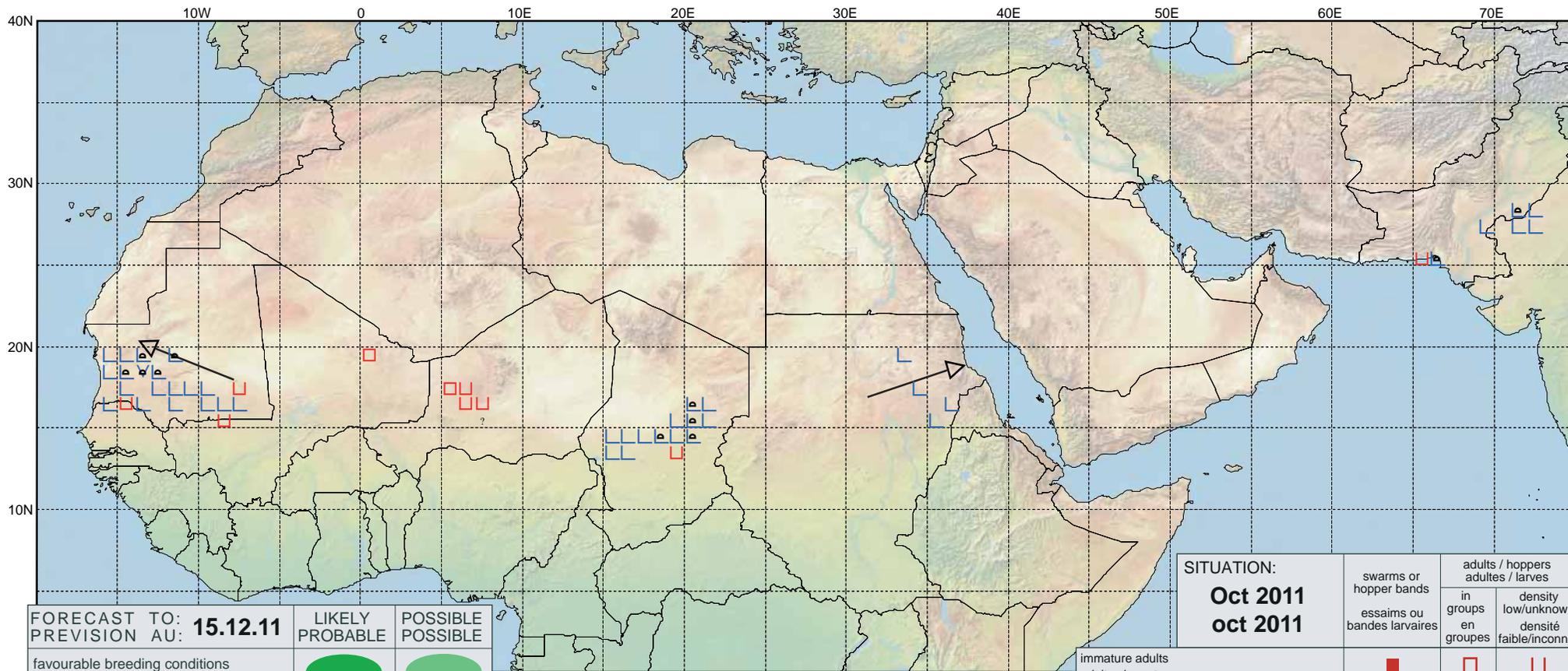
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU:	LIKELY PROBABLE	POSSIBLE POSSIBLE
15.12.11		
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 2011 oct 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)			