

warning level: **CALM**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 381

(2 July 2010)



General Situation during June 2010 Forecast until mid-August 2010

The Desert Locust situation remained calm during June. Locusts declined in the spring breeding areas of Northwest Africa and Arabia due to control operations and drying conditions. Limited control was carried out against hopper bands in Saudi Arabia, groups of adults in Algeria and scattered adults in Morocco. Unusually heavy rains associated with Cyclone Phet fell in parts of Oman, Iran, Pakistan and India in early June. Small-scale breeding occurred in southwest Libya, the interior of Saudi Arabia and in eastern Ethiopia. Scattered adults were present in Sudan, Yemen and Oman. Seasonal rains commenced in the summer breeding areas of the Sahel in West Africa and Sudan. During the forecast period, small-scale breeding will occur in the northern Sahel of West Africa and Sudan and along the Indo-Pakistan border, causing locust numbers to increase slightly but remain below threatening levels. No significant developments are expected.

Western Region. Locust populations declined in Northwest Africa along the southern side of the Atlas Mountains in **Morocco** where 303 ha of scattered adults were treated. Ground teams in **Algeria** treated 350 ha of solitary hoppers and adults near cropping areas in the central Sahara. Small-scale breeding occurred in southwest **Libya** where scattered hoppers and adults were reported. No locust surveys were carried out in the summer breeding areas of the Sahel in West Africa. During the forecast period, locusts will decline in Northwest Africa as they move towards the southern Sahara in Algeria and the northern Sahel

in West Africa. Small-scale breeding is expected to commence in southern **Mauritania**, northern **Mali** and **Niger**, and perhaps eastern **Chad** where seasonal rains started in June. This will cause locust numbers to increase slightly during the forecast period but remain below threatening levels.

Central Region. Locust infestations declined on the Red Sea coast of **Saudi Arabia** where control operations were carried out in May. Ground teams treated 5 ha of hopper bands that formed on the edge of the spring breeding area in the interior. Unusually heavy rains associated with Cyclone Phet fell in northern **Oman** in early June. Although only scattered adults were present, there is a high risk that additional breeding could occur during the next several months, causing locust numbers to increase. Surveys began in the summer breeding areas in the interior of **Sudan** and **Yemen** in June. So far, only low numbers of adults were seen in cropping areas along the Nile in northern Sudan and in a few places in Yemen. During the forecast period, small-scale breeding will occur in Sudan in areas where seasonal rains commenced in June. Isolated adults were seen in the Western Desert in **Egypt**. Undetected breeding occurred in eastern **Ethiopia** during May, giving rise to scattered hoppers and adults in June. During the forecast period, breeding is likely to continue in areas of recent rainfall. No locusts were reported elsewhere in the region.

Eastern Region. Low numbers of solitary locusts began to appear in the summer breeding areas of Cholistan, **Pakistan** near the border of **India** in mid-June. Breeding conditions are expected to be unusually favourable this year along both sides of the border because of heavy rains that fell in early June from Cyclone Phet. Consequently, small-scale breeding will cause locusts to increase during the forecast period in both countries but numbers will remain below threatening levels. No locusts were reported in **Iran** and **India** during June.

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 June 2010

Vegetation continued to dry out in the spring breeding areas of Northwest Africa and the interior of Saudi Arabia. Unusually heavy rains associated with Cyclone Phet fell in northern Oman, extending to parts of Iran, Pakistan and India. Ecological conditions started to become favourable in the summer breeding areas of the Sahel in West Africa and Sudan where seasonal rains began to fall during June.

In the **Western Region**, light rain fell at times in the Hoggar Mountains in southern Algeria, causing runoff in several nearby wadis. Light rains also fell in parts of eastern Algeria, extending to northwest Libya, and in the extreme south along the borders of Mali and Niger. Ecological conditions remained favourable in parts of the central Sahara in Algeria between Tamanrasset and In Salah, and in agricultural areas near Adrar. In Morocco, vegetation continued to dry out in the Draa Valley where conditions were no longer favourable for breeding. In West Africa, the Inter-Tropical Convergence Zone (ITCZ) moved progressively northwards during June. Consequently, seasonal rains commenced from the first decade of the month onwards in southeast Mauritania, northern Mali (Adrar des Iforas, Tilemsi Valley, Tamesna), Niger (Tamesna and western Air Mountains) and eastern Chad (as far north as Abeche). Sufficient rain has fallen in some areas to allow small-scale breeding to commence in July.

In the **Central Region**, vegetation continued to dry out in the spring breeding areas in the interior of Saudi Arabia as well as along the Red Sea coastal plains. As the ITCZ moved progressively northwards during June, seasonal rains began to fall in the summer breeding areas in the interior of Sudan, reaching 15N by the end of the month. Sufficient rain is likely to have fallen in some areas to allow small-scale breeding to commence in July. In Yemen, light rains fell on the Red Sea coast and a few showers were reported in the summer breeding areas in the interior of Shabwah and Hadhramaut where conditions remained unfavourable for breeding. In the Horn of

Africa, light showers fell on the plateau between Dire Dawa, Ethiopia and Hargeisa, northern Somalia. This should allow conditions to become favourable for Desert Locust survival and limited breeding. In northern Oman, unusually heavy rains associated with Cyclone Phet fell in the Sharqiya region on 3-4 June. The cyclone then moved east across the Arabian Sea. Once floodwaters recede, ecological conditions are expected to be favourable for locust survival and breeding for several months.

In the **Eastern Region**, heavy rains associated with Cyclone Phet fell on 4-5 June in coastal areas from Zaribad, Iran to Karachi, Pakistan, extending to the summer breeding areas of Tharparkar, Pakistan and Rajasthan, India on 6-7 June. Consequently, ecological conditions will be unusually favourable for locust breeding in these areas during the coming months. The cyclone appears to have temporarily disrupted the seasonal advance of the monsoon towards the summer breeding areas in both countries. However, by the end of the month, monsoon rains began to fall in Gujarat and parts of southeastern Rajasthan but vegetation remained dry.



Area Treated

Algeria	428 ha (May revised)
	350 ha (June)
Morocco	303 ha (June)
Saudi Arabia	5 ha (June)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

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

• FORECAST

Locust numbers will gradually increase in the southeast as small-scale breeding commences in areas of recent rainfall. Small-scale breeding will occur in other areas of the south and centre of the country depending on rainfall.

Mali

• SITUATION

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

- **FORECAST**

Isolated adults are likely to be present in parts of the Adrar des Iforas where small-scale breeding will commence with the onset of the seasonal rains, causing locust numbers to increase slightly but remain below threatening levels.

Niger

- **SITUATION**

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

- **FORECAST**

Isolated adults are likely to be present in southern and eastern parts of the Tamesna where small-scale breeding is expected to occur in areas of recent rainfall, causing locust numbers to increase slightly but remain below threatening levels.

Chad

- **SITUATION**

No reports were received during June.

- **FORECAST**

Isolated adults are likely to appear in parts of the east near Abeche where small-scale breeding is expected to occur in areas of recent rainfall, causing locust numbers to increase slightly but remain below threatening levels.

Senegal

- **SITUATION**

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

- **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 June, ground teams treated 350 ha in the central Sahara near Adrar (2753N/0017W) where second to fifth instar hoppers mixed with immature and mature solitary adults were present in about a dozen agricultural areas. Adult densities varied from 500 to 3,000 adults/ha. Some of the mature adults were *transiens* and forming small groups. *Transiens* hoppers were also present. No locusts were seen during surveys carried out in the west near Tindouf (2741N/0811W) and Beni Abbes (3011N/0214W), in the south between In Salah (2712N/0229E) and Tamanrasset (2250N/0528E) and in the east near Djanet (2434N/0930E).

- **FORECAST**

Locust numbers will decline in the central Sahara as conditions dry out and low numbers of adults move towards the southern Sahara. Small infestations could persist near agricultural areas in Adrar.

Morocco

- **SITUATION**

During June, locust numbers declined along the southern side of the Atlas Mountains. Only low densities of scattered immature and mature solitary adults were present at about a dozen places in the Draa Valley along the Algerian border south of Fom El Hassan (2901N/0853W). Ground teams treated 303 ha during the first decade of the month

- **FORECAST**

Locust numbers will continue to decline south of the Atlas Mountains and no significant developments are likely.

Libyan Arab Jamahiriya

- **SITUATION**

During June, scattered second to fourth instar solitary hoppers and immature and mature solitary adults were present in the southwest near Ghat (2459N/1011E) and the Algerian border at densities up to 2,000 adults/ha. A few adults were copulating at mid-month. In the northwest, no locusts were seen during surveys carried out in the Al Hamada Al Hamra between Ghadames (3010N/0930E) and Mizda (3127N/1259E).

- **FORECAST**

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

Tunisia

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

- **SITUATION**

During June, scattered mature solitary adults were present in a few cropping areas along the Nile River in Northern and River Nile States near Merowe (1830N/3149E), Abu Hamed (1932N/3320E)



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and Atbara (1742N/3400E) as well as along the Atbara River. No locusts were seen near Dongola (1910N/3027E) and in the summer breeding areas of North Kordofan, Khartoum, White Nile and Kassala States.

- **FORECAST**

Low numbers of solitary adults are likely to appear in the summer breeding areas of West and North Darfur, West and North Kordofan, and White Nile and breed on a small scale once the summer rains start. Low numbers of locusts will persist and could breed in cropping areas along the Nile and Atbara Rivers. Consequently, locust numbers are expected to increase slightly but will remain below threatening levels.

Eritrea

- **SITUATION**

No reports were received during June.

- **FORECAST**

Low numbers of solitary adults may appear in the summer breeding areas in the western lowlands and breed on a small scale with the onset of the summer rains.

Ethiopia

- **SITUATION**

Unconfirmed reports from late May were confirmed to be isolated maturing solitary adults in a few places near Aysha (1045N/4234E) and the borders of Djibouti and northern Somalia. Undetected small-scale breeding occurred during May, giving rise to scattered hoppers in June. A few adults were seen copulating during the second and third weeks of June. No locusts were seen during surveys near Dire Dawa (0935N/4150E).

- **FORECAST**

Small-scale breeding will cause locust numbers to increase slightly in the Aysha area, but numbers will remain below threatening levels. Hatching will occur in early July and fledging will take place during the first half of August.

Djibouti

- **SITUATION**

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

- **FORECAST**

No significant developments are likely.

Somalia

- **SITUATION**

During June, no locusts were seen during surveys carried out on the northwest escarpment between Hargeisa (0931N/4402E) and Silil (1058N/4326E) and on the coastal plains from the Djibouti border to Berbera (1028N/4502E).

- **FORECAST**

Low numbers of solitary adults may be present in parts of the plateau between Boroma and Burao where small-scale breeding could occur in areas of recent rainfall.

Egypt

- **SITUATION**

During June, isolated solitary adults were seen at one farm near Sh. Oweinat (2219N/2845E). Elsewhere, no locusts were seen during surveys carried out in the Western Desert near Bahariya (2821N/2851E), Farafra (2710N/2818E) and Dakhla (2530N/2900E), and on the western shore of Lake Nasser near Tushka (2247N/3126E) and Abu Simbel (2219N/3138E).

- **FORECAST**

No significant developments are likely.

Saudi Arabia

- **SITUATION**

During June, locusts declined on the Red Sea coast where only small residual populations of immature solitary adults remained near Rabigh (2247N/3901E). On the western edge of the interior, low-density groups of immature adults were present east of Taif (2115N/4021E) near Al Khurmah (2155N/4202E) and ground teams treated 5 ha of late instar hopper bands. Small-scale breeding occurred in the interior near Hail (2731N/4141E) where isolated fifth instar solitary hoppers were present at mid-month. No locusts were seen in the interior near Buraydah (2621N/4358E) or in the Asir Mountains near Khamis Mushait (1819N/4245E).

- **FORECAST**

Locusts will continue to decline in all areas and no significant developments are expected.

Yemen

- **SITUATION**

During June, scattered immature and mature solitary adults were present at a few places of the interior near Shabwah (1522N/4700E) and between Ataq (1435N/4649E) and Bayhan (1452N/4545E). No locusts were seen elsewhere in the summer breeding areas.

- **FORECAST**

Scattered adults will persist in the summer breeding areas of the interior and breed on a small scale if rainfall occurs.

Oman

- **SITUATION**

During June, scattered mature solitary adults were present at two places on the northeastern edge of the Wahiba Sands southeast of Ibra (2243N/5831E) in Sharqiya. This area received unusually heavy rains in early June from Cyclone Phet. No locusts were seen during surveys in Dakhliya and Dhahera and Dhofar regions.

- **FORECAST**

Small-scale breeding is likely to occur in those areas of Sharqiya that received heavy rainfall from Cyclone Phet, causing locust numbers to increase slightly. 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 June, no locusts were seen during surveys carried out on the southeastern coast near Bander-e Lengheh (2634N/5452E), Jask (2540N/5746E), and Chabahar (2517N/6036E).

- **FORECAST**

No significant developments are likely.

Pakistan

- **SITUATION**

No locusts were seen during surveys carried out in the spring breeding areas of Baluchistan during the second half of May.

During the last week of June, isolated mature solitary adults were present at two places in Cholistan near Dhandwala (2818N/7207E) and the Indian border.

- **Forecast**

Small-scale breeding is expected to occur in parts of the summer breeding areas in Cholistan and Tharparkar that received rainfall associated with Cyclone Phet in June.

India

- **SITUATION**

No locusts were seen during intensive surveys carried out during the second half of May and during

June in the summer breeding areas in Rajasthan and Gujarat.

- **FORECAST**

Low numbers of solitary adults are expected to appear in the summer breeding areas in Rajasthan and Gujarat and breed on a small scale in areas that received rainfall associated with Cyclone Phet in June.

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 group. FAO DLIS has established a Google group for national locust information officers to exchange opinions and share experiences regarding



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Glossary of terms

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

data management and analysis, GIS, eLocust2, eLocust2Mapper and satellite imagery. Interested information officers should contact DLIS (ecl@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).

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

Locust Watch in Caucasus and Central Asia. The third regional monthly bulletin has been issued and is available on the website (www.fao.org/ag/locusts-CCA/en/index.html). The bilingual bulletin (English/Russian) summarizes the regional locust situation in the previous month and includes a forecast for the coming month for Italian, Moroccan and Migratory locusts. It will be issued by the 15th of each month.

2010 events. The following activities are scheduled or planned:

- **CRC training.** 3rd regional aerial Desert Locust training course, Moshi, Tanzania (2-6 Aug)
- **CRC.** 31st session of Executive Committee and 27th session of Commission, Beirut, Lebanon (20-24 Sep)
- **EMPRES/WR.** Desert Locust Master Trainers (Survey) regional workshop, Mauritania (Oct)
- **SWAC.** 27th session, Islamabad, Pakistan (Dec)
- **EMPRES/WR.** 6th Steering Committee meeting and 9th EMPRES Liaison Officers meeting, Tripoli, Libya (Dec)

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.



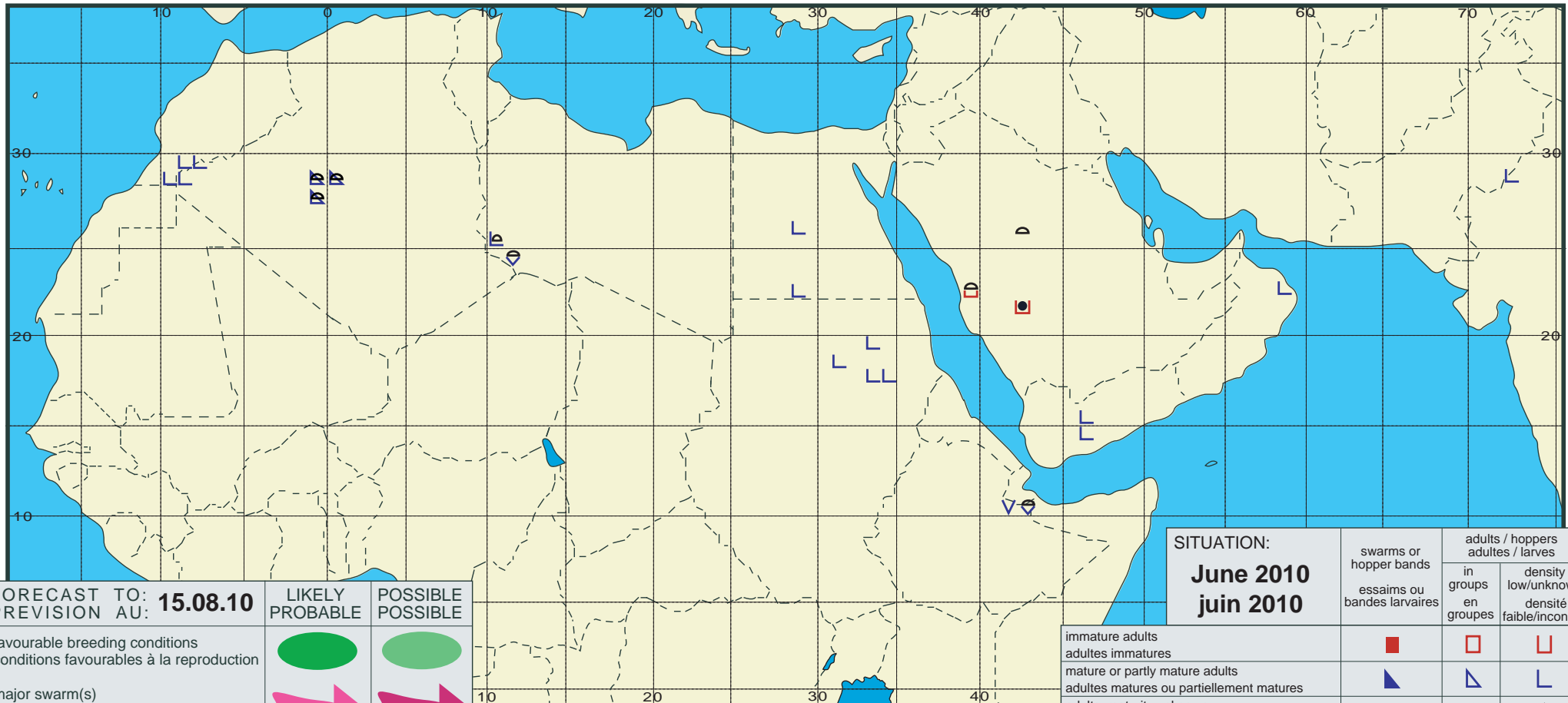
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Desert Locust Summary

Criquet pèlerin - Situation résumée

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FORECAST TO: PREVISION AU: 15.08.10	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: June 2010 juin 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)			