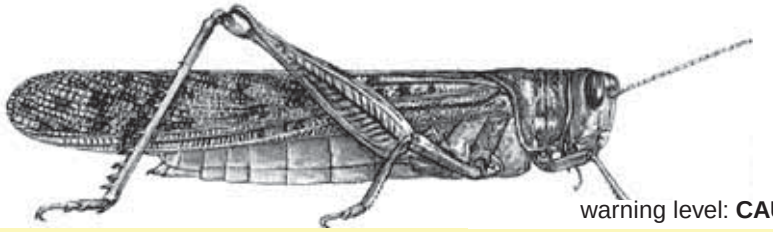

warning level: **CAUTION (NW Africa)**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations

No. 360

(2 October 2008)

General Situation during September 2008 Forecast until mid-November 2008

The Desert Locust situation remained calm during September. Small-scale breeding continued in southern Mauritania but locust numbers remained low. A similar situation is likely in northern Mali and Niger but this could not be confirmed by surveys because of insecurity. Locust numbers will increase in northwest Mauritania as adults arrive from the summer breeding areas in the south and lay eggs in areas of recent rainfall. Unusually heavy rains in Western Sahara and in adjacent areas of northern Mauritania could allow breeding for several months; hence, a warning level of CAUTION, and these areas should be monitored carefully. Scattered adults in the summer breeding areas in the interior of Sudan will move to the Red Sea coastal plains and eventually lay eggs but this movement and subsequent breeding will be limited. Small-scale breeding is likely on the Red Sea coast in Yemen and to a lesser extent in Eritrea and Saudi Arabia during the forecast period. No locusts were reported along the Indo-Pakistan border where the monsoon rains have nearly ended and vegetation is drying out.

Western Region. Locust numbers continued to remain low in the northern Sahel even though breeding occurred during September in **Mauritania**. A similar situation is likely in northern **Mali** and **Niger** where surveys were not possible due to continued insecurity. Isolated adults were seen in northeast **Chad** but breeding was not detected. As summer rains end and vegetation dries out, adults are likely to concentrate in the few areas that remain green in the northern Sahel in Mali, Niger and Chad. In Mauritania, scattered adults started moving from the summer breeding areas in the south towards the west and northwest of the country where another generation of breeding is likely to commence during the forecast period. Breeding is expected to extend into parts of northern Mauritania and adjacent areas of **Western Sahara** where good rains fell in September. No locusts were seen during surveys in southern **Algeria** or reported elsewhere in Northwest Africa.

Central Region. Scattered solitarious adults persisted during September in the interior of **Sudan** west of the Nile where ecological conditions were favourable but breeding was not detected by ground surveys. A few isolated adults were seen on a farm in the interior of **Saudi Arabia**. Although good rains fell on the Red Sea coast of **Yemen** for the third consecutive month, surveys were not carried out in areas where locusts are likely to be present and breeding. No locusts were seen during surveys in **Egypt**, **Eritrea**, northern **Somalia**, and **Oman**. During the forecast period, adults will start to move from the interior of Sudan towards the Red Sea coast where they will lay eggs. This movement is expected to be very limited this year. Small-scale breeding is likely to occur on the Red Sea coast in Yemen and, to a lesser extent, in Saudi Arabia and Eritrea.

Eastern Region. Although locusts were not seen in the summer breeding areas in Rajasthan, **India**, low numbers of hoppers and adults were probably present in adjacent areas of **Pakistan**. Ecological conditions were not very favourable for breeding because the monsoon rains were patchy and generally poor. No significant developments are likely during the forecast period.

The FAO Desert Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by e-mail, FAO pouch and airmail by the Locusts and Other Migratory Pests Group, AGP Division, FAO, 00153 Rome, Italy. It is also available on the Internet.
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DLIS: www.fao.org/ag/locusts

No. 360

DESERT LOCUST BULLETIN

Weather & Ecological Conditions in September 2008

Ecological conditions remained favourable for breeding in the northern Sahel in West Africa and Sudan but vegetation started to dry out in some places by the end of September as rainfall decreased. Good rains fell in the Western Sahara and along parts of the Red Sea coastal plains. Breeding conditions were less favourable along the Indo/Pakistan border as the monsoon rains weakened and vegetation started to dry out.

In the **Western Region**, ecological conditions continued to be favourable for breeding in the northern Sahel between Mauritania and Chad during September. The Inter-Tropical Convergence Zone (ITCZ) oscillated between 15N and 20N, with occasional surges northwards to 21N over northwest Mali. Light to moderate rains fell in parts of the summer breeding areas in Mauritania, Mali (west of Tombouctou; the Adrar des Iforas), Niger (Tamesna and Air Mountains), northeast Chad, and in southern Algeria (between Tamanrasset and Mali). By the end of the month, rains declined in the summer breeding areas and vegetation started to dry, mainly in southern Mauritania and in eastern Mali, but small patches of green vegetation remained in the Adrar des Iforas in northern Mali and on the Tamesna plains and the western side of the Air Mountains in Niger. Unusually good rains fell at times during the second half of the month in northern Mauritania (Zouerate to Bir Moghrein to El Hank) and adjacent areas of Western Sahara, which will cause breeding conditions to become favourable.

In the **Central Region**, ecological conditions remained favourable for breeding in the interior of Sudan during September. Good rains fell in parts of these areas (North Darfur, North Kordofan, Nile, Northern and Kassala states) as well as on the western side of the Red Sea Hills during the first decade but declined thereafter and vegetation started to dry out. Light to moderate rains fell on the Red Sea coastal plains in Eritrea (Shieb 40 mm and Mehimet 34 mm) and to a lesser extent in Sudan in early September, which should cause vegetation to become green. Good rains also fell on the eastern side of the Red Sea along a large portion of the coast and adjacent hills between Bader, Saudi Arabia and Mocha, Yemen. Ecological conditions are expected to be favourable for small-scale breeding on the Yemeni coast and will improve in Saudi Arabia. In northern Somalia, light rains fell on the northwest plateau, extending into adjacent areas of Ethiopia. Vegetation was green on the plateau but dry along the northwest coast.

In the **Eastern Region**, monsoon rains declined during September along both sides of the Indo-Pakistan border. Only light rains fell in parts of Tharparkar Desert in southeast Pakistan. Consequently, vegetation was starting to dry out and ecological conditions were becoming less favourable for breeding.

Area Treated

No control operations were reported in 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 continued in the southeast (Hodh Ech Chargui) east of Nema (1636N/0715W) and in centre of the country (Tagant) near Tidjikja (1833N/1126W). Breeding also occurred in the Aoukar region northwest of Magta Lahjar (1730N/1305W) where hatching commenced during the second week. After mid-month, locusts declined in the southeast as vegetation dried out and adults moved west to Trarza, northern Brakna and western Tagant. There was one report of locusts reaching Akjoujt (1945N/1421W). By the end of the month, scattered immature and mature solitarious adults were concentrated mainly in the Aoukar north of Boutilimit (1732N/1441W) where low-density solitarious hoppers had reached fourth instar. Adults were also present near Tidjikja and between Aioun El Atrous (1639N/0936W) and Timbedra (1614N/0809W).

• **FORECAST**

As vegetation dries out in the south, some adults will concentrate in areas that remain green in Trarza, Brakna and Tagant while others will move west and northwest towards Adrar and Inchiri and breed on a

small scale. Low numbers of adults could also move north to areas of recent rainfall in Tiris Zemmour and lay eggs. Regular surveys should be undertaken to monitor the situation.

Mali

• **Situation**

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

• **Forecast**

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

Niger

• **Situation**

Although surveys could not be carried out in September because of continued insecurity, an individual mature adult was seen between Agadez and Tahoua near Agabar Gabar (1600N/0700E) on the 21st.

• **Forecast**

Unless further rains fall, low numbers of locusts are likely to concentrate in areas that remain green in Tamesna and the western Air Mountains and breed on a small scale if conditions are favourable.

Chad

• **Situation**

During the second decade of September, two individual mature solitarious adults were seen near Kalait (1550N/2054E) during surveys carried out in the east between Arada (1501N/2040E) and Fada (1714N/2132E). No locusts were seen in the west near Mao (1406N/1511E) in southern Kanem region.

• **Forecast**

Low numbers of locusts are likely to be present and breeding in the east and northeast between Abeche and Fada. Unless further rains fall, breeding will end and scattered adults are likely to concentrate in areas that remain green.

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 surveys carried out in September in the southern Sahara west of Tamanrasset (2250N/0528E) and along the Malian border between Bir Bou Mokhtar (2120N/0056E) and Tin Zaouatene (1958N/0258E).

• **Forecast**

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

Morocco

• **Situation**

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

• **Forecast**

Scattered adults may appear in areas of recent rainfall in Western Sahara and breed on a small scale. Surveys should be undertaken to monitor the situation carefully.

Libyan Arab Jamahiriya

• **Situation**

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

• **Forecast**

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 solitarious adults persisted at densities up to 100 adults/ha in North Kordofan near Sodiri (1423N/2906E) and Umm Saiyala (1426N/3112E). No locusts were seen during

surveys elsewhere in North Kordofan, Northern, and River Nile States.

• Forecast

Small-scale breeding is likely to be in progress and continue in early October in North Darfur, North Kordofan, Nile and Kassala states, causing locust numbers to increase slightly. Thereafter, vegetation is expected to dry out and adults will move towards the Red Sea coast, appearing along the western side of the Red Sea Hills and on the coastal plains where they will eventually lay eggs.

Eritrea

• **Situation**

No locusts were seen during surveys carried out in the southern part of the western lowlands on 29-31 August and on the Red Sea coast between Massawa (1537N/3928E) and Karora (1745N/3820E) during the first week of September.

• **Forecast**

Scattered adults may appear on the Red Sea coastal plains between Massawa and Karora where they are likely to breed on a small-scale in areas that received rainfall or runoff in early September.

Ethiopia

• **Situation**

No reports were received in September.

• **Forecast**

Scattered adults may be present between Harar and northern Somalia where they could breed on a small-scale in areas of recent rainfall.

Djibouti

• **Situation**

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

• **Forecast**

No significant developments are likely.

Somalia

• **Situation**

No locusts were seen during surveys undertaken on the plateau between Hargeisa (0931N/4402E) and Boroma (0956N/4313E) and on the northwest coast between Silil (1058N/4326E) and Berbera (1028N/4502E) on 15-20 September.

• **Forecast**

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

Egypt

• **Situation**

No locusts were seen during surveys carried out in the second week of September in areas of recent rainfall in the central Red Sea Hills east of Sohag (2633N/3142E).

• **Forecast**

No significant developments are likely.

Saudi Arabia

• **Situation**

During September, isolated immature solitarious adults were reported on an irrigated farm southwest of Riyadh near Ash Shukrah (2315N/4640E). No locusts were seen during surveys carried out on the Red Sea coast between Lith (2008N/4016E) and Yenbo (2405N/3802E), in the interior near Buraydah (2621N/4358E), and in the extreme north near the Jordanian border.

• **Forecast**

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

Yemen

• **Situation**

No surveys were carried out for the third consecutive month in September.

• **Forecast**

Scattered adults may be present and breeding in areas of recent rainfall on the Red Sea coast. Small-scale breeding is expected to continue during the forecast period, which will cause locust numbers to increase. All efforts should be made to conduct surveys on a regular basis on the Tihama.

Oman

• **Situation**

No locusts were seen during surveys carried out in the northern regions of Midha, Dhahera and Musandam in September.

• **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 September, scattered mature solitarious adults were seen at three places along the southeastern coast between Chabahar (2517N/6036E) and the Pakistani border.

• **FORECAST**

No significant developments are likely.

Pakistan

• **SITUATION**

No reports were received during the second half of August and in September.

• **FORECAST**

Breeding will end in Cholistan and Tharparkar deserts as vegetation dries out. Only low numbers of solitarious adults are likely to persist in areas that remain green.

India

• **SITUATION**

No locusts were seen during extensive surveys in Rajasthan and Gujarat during September.

• **FORECAST**

No significant developments are likely.

Afghanistan

• **SITUATION**

No reports received.

• **FORECAST**

No significant developments are likely.

Announcements

Locust reporting. During recession periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During caution (yellow) and threat (orange) periods, locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent at least twice/week within 48 hours of the latest survey. Affected countries are also encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to the FAO/ECLO Desert Locust Information Service (eclo@fao.org). Information received by the end of the month will be included in the FAO Desert Locust Bulletin for the current month; otherwise, it will not appear until the following month. Reports should be sent even if no locusts were found or if no surveys were conducted.

Desert Locust warning levels. A colour-coded scheme indicates the seriousness of the current Desert Locust situation: green for *calm*, yellow for *caution*, orange for *threat* and red for *danger*. The scheme is applied to the Locust Watch web page and to the monthly bulletin's header. The levels indicate the perceived risk or threat of current Desert Locust infestations to crops and appropriate actions are suggested for each level.

Google group. FAO DLIS has established a Google group for national locust information officers to exchange opinions and share experiences regarding data management and analysis, GIS, eLocust2 and satellite imagery. Interested information officers should contact DLIS (eclo@fao.org) for details.

MODIS imagery. Columbia University's International Research Institute for Climate and Society (IRI) provides 16-day 250-metre resolution MODIS imagery as well as daily and decadal rainfall imagery for monitoring breeding conditions in the Desert Locust recession area. These products can be downloaded in different formats suitable for GIS at: http://iridl.ldeo.columbia.edu/maproom/.Food_Security/.Locusts/index.html. Comments and questions can be addressed to Pietro Ceccato (pceccato@iri.columbia.edu).

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

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

Links to the above information can be found in the *Latest Additions* section on Locust Watch.

2008-2009 events. The following activities are scheduled:

- **Western Region.** Experts meeting (21-22 October) and 1st meeting of Agriculture Ministers in CLCPRO countries (23 October), Bamako
- **EMPRES/WR.** 7th Liaison Officers meeting, Niamey (24-28 November, to be confirmed)
- **EMPRES/WR.** 4th Steering Committee meeting, Niamey (1-3 December, to be confirmed)
- **SWAC.** 26th Session, Kabul (15-17 December)
- **DLCC.** 39th Session, Rome (10-13 March)

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DESERT LOCUST BULLETIN

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 km^2
- band: 1 - 25 m^2

SMALL

- swarm: 1 - 10 km^2
- band: 25 - 2,500 m^2

MEDIUM

- swarm: 10 - 100 km^2
- band: 2,500 m^2 - 10 ha

LARGE

- swarm: 100 - 500 km^2
- band: 10 - 50 ha

VERY LARGE

- swarm: 500+ km^2
- 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

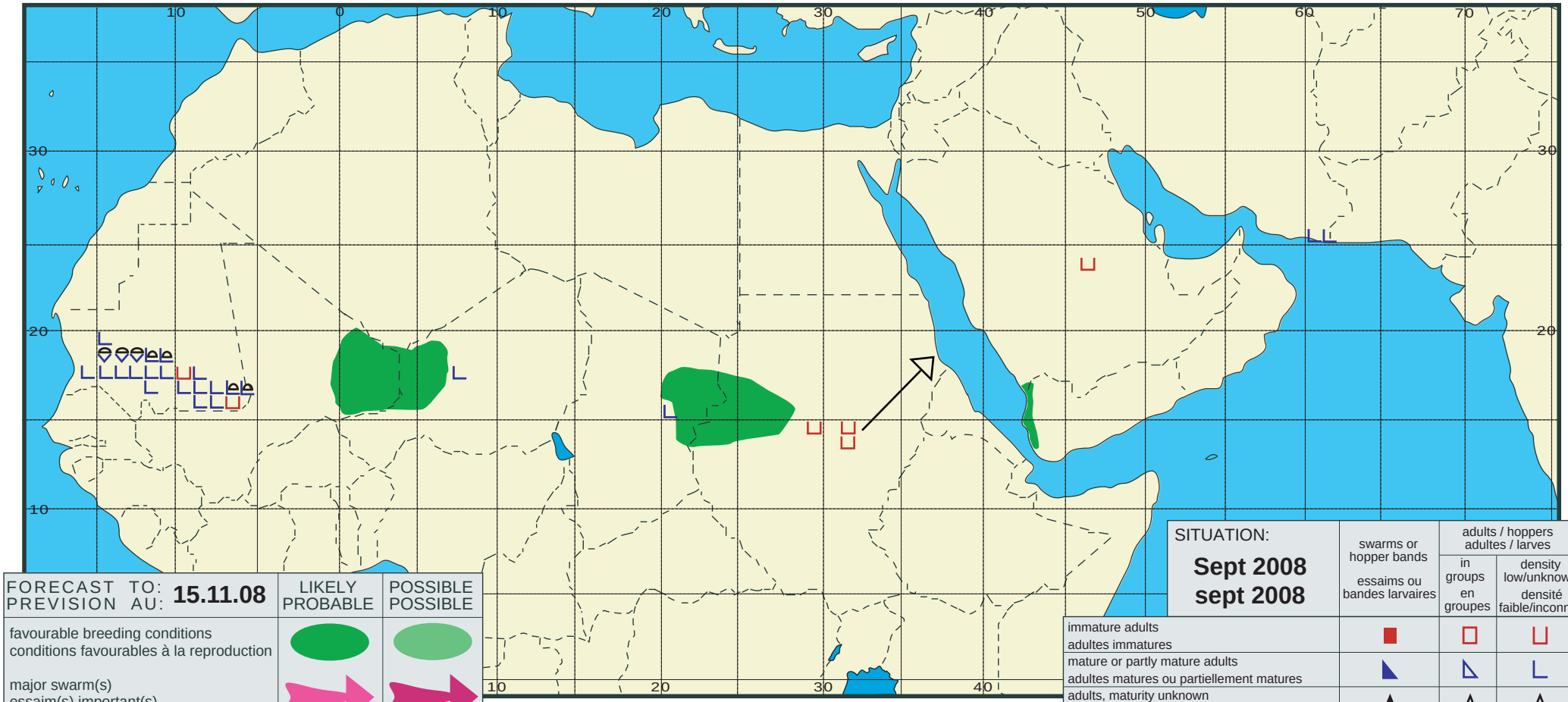
only: Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Qatar, Syria, Tanzania, Turkey, UAE and Uganda.

EASTERN

- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.

Desert Locust Summary
Criquet pèlerin - Situation résumée

360



FORECAST TO: / PREVISION AU: **15.11.08**	LIKELY / PROBABLE	POSSIBLE / POSSIBLE
favourable breeding conditions conditions favourables 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 2008 sept 2008**	swarms or hopper bands essaims ou bandes larvaires	adults / hoppers adultes / larves: in groups en groupes	adults / hoppers adultes / larves: density low/unknown densité faible/inconnue
immature adults adultes immatures	■	□	⊔
mature or partly mature adults adultes matures ou partiellement matures	◣	◺	L
adults, maturity unknown adultes, maturité inconnue	▲	△	Λ
egg laying or eggs pontes ou œufs	▼	▽	V
hoppers larves	●	○	◡
hoppers & adults (combined symbol example) larves et adultes (exemple symboles combinés)	◘	◙	◒