Food and Agriculture Organization of the United Nations

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Desert Locust Bulletin

General situation during October 2020
Forecast until mid-December 2020

WESTERN REGION: CALM

SITUATION. Small-scale breeding in **Mauritania**, **Niger**, **Chad,** and **Algeria**.

FORECAST. Locusts will decline in summer areas. Small-scale breeding in northwest **Mauritania**.

CENTRAL REGION: THREAT

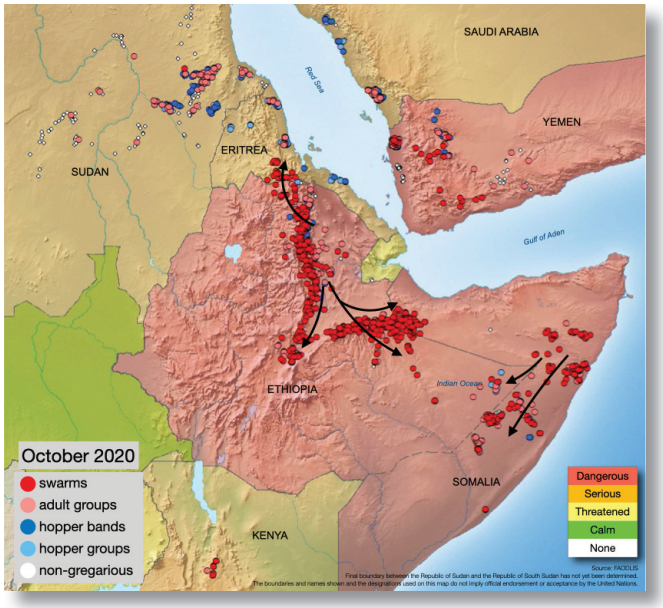
SITUATION. Numerous swarms in northeast **Ethiopia** (335 453 ha treated) that moved north to Eritrea, south to Rift Valley, and east to Somali region; swarms in northeast **Somalia** (12 974 ha) moved south; swarms arrive in Ogaden and central Somalia, lay and new hatching; hopper bands in eastern **Sudan** (52 912 ha); summer breeding ends in Yemen interior; hopper bands on Red Sea coast of **Eritrea** (10 354 ha), **Yemen** (4 609 ha), **Saudi Arabia** (21 290 ha), and Sudan; residual swarms maturing in northwest **Kenya** (318 ha).

FORECAST. More hatching and band formation in eastern **Ethiopia** (Ogaden) and **Somalia** with new swarms forming in early December that will threaten southeast Ethiopia, southern Somalia, and northeast Kenya. Local breeding in northwest **Kenya**. Breeding to continue along both sides of Red Sea in **Eritrea**, **Sudan**, **Saudi Arabia**, and **Yemen** with possibility of hopper band and swarm formation, especially in Yemen.

EASTERN REGION: CALM

SITUATION. Limited control operations against residual infestations in **Pakistan** (220 ha); no locusts in **India**; small adult groups in southeast **Iran** (40 ha).

FORECAST. Low numbers of adults are likely to persist in southeast **Iran** and southwest **Pakistan**; no significant developments.



Epicentre shifting to eastern Ethiopia and Somalia

As anticipated, numerous swarms formed in northeast Ethiopia during October. The situation improved by the end of the month due to intensive control operations, and as swarms moved north into the highlands and to Eritrea, south into the Rift Valley, and further east. Consequently, the epicentre will shift to the Somali region in eastern Ethiopia and adjacent areas of Somalia where control operations are in progress. Another generation of breeding started in this vast area where mature swarms in northeast Somalia moved southwards and laid eggs that are hatching and hopper bands are forming. More bands will form during November and a new generation of immature swarms will form in early December that are expected to move south and threaten southeast Ethiopia, southern Somalia, and northeast Kenya. The swarms that moved to Eritrea are likely to reach the Red Sea coast where control operations are in progress against hopper bands. Control continued against hopper bands in eastern Sudan and on the Red Sea coast in Yemen and southwest Saudi Arabia. Breeding ended in the Yemen interior and swarms moved to the coast. Winter breeding along both sides of the Red Sea could cause hopper bands and swarms to form, especially in Yemen. The situation will continue to remain calm in other regions and no significant developments are expected.

The FAO Desert Locust Bulletin is issued every month by the Desert Locust Information Service (DLIS) at FAO HQ in Rome, Italy. DLIS continuously monitors the global Desert Locust situation, weather and ecology to provide early warning based on survey and control results from affected countries, combined with remote sensing, historical data and models. The bulletin is supplemented by Alerts and Updates during periods of increased Desert Locust activity.

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Weather & Ecological Conditions in October 2020

Good rains fell in eastern Ethiopia and central Somalia, causing favourable breeding conditions. Favourable conditions persisted along both sides of the southern Red Sea. Vegetation was drying out in the summer breeding areas of West Africa and Sudan.

WESTERN REGION

The Inter-Tropical Convergence Zone (ITCZ) continued its seasonal movement southwards during October. Nevertheless, its position was nearly 225 km further north than usual in the first decade from Mali to Chad, which was further north than in the last decade of September. During the second decade, the ITCZ was some 100 km further south than normal and had moved well south of the summer breeding areas in the Sahel. Light to moderate rains fell in southern Mauritania, in northern Mali from Araouane to the Adrar des Iforas, the southern Tamesna Plains in Niger, and central Chad during the first decade while little rainfall occurred in the second decade. Consequently, breeding conditions remained favourable in the south and northwest of Mauritania and northeast Chad but were drying out in Niger and central Chad. In Northwest Africa, very little rain fell except for light to moderate showers in the central Western Sahara near Bir Anzarane. In Algeria, breeding conditions were favourable in the Adrar Valley and on the Niger border near In Guezzam but were drying out west of Tamanrasset.

CENTRAL REGION

The Inter-Tropical Convergence Zone (ITCZ) continued its seasonal movement southwards during October. Nevertheless, its position was nearly 100 km further north than usual in the first decade over Darfur, which was further north than in the last decade of September. During the second decade, the ITCZ was more than 100 km further south than normal and had moved south of the summer breeding area in Sudan and Eritrea. During the first decade, light to moderate rains fell south of Geneina, El Fasher, and En Nahud in Sudan while light rains fell in a few places west of the Red Sea Hills. Breeding conditions remained favourable between the Nile Valley and the Red Sea Hills and along Wadi Oko/Diib in the northeast. In the Horn of Africa, light to moderate rains fell throughout the month in the Ogaden of eastern Ethiopia, adjacent areas of central Somalia, and in southern Somalia, which allowed conditions to become favourable for breeding. In the winter breeding areas, light rains fell on the central coast of the Red Sea in Eritrea during the first decade. Rainfall occurred in the foothills along parts of the Red Sea coast in Yemen and Saudi Arabia that may have run off onto the coastal plains. Breeding conditions remained favourable on the coast of Eritrea, in Tokar Delta of Sudan, and Yemen but vegetation was drying out in many areas on the coast of Saudi Arabia except near Lith.

EASTERN REGION

No significant rain in the region fell during October. Due to the withdrawal of the monsoon, vegetation continued to dry out in the summer breeding areas along both sides of the Indo-Pakistan border. Elsewhere, dry conditions prevailed.

Area Treated

There was a substantial increase in control operations during October, treating 438 170 ha compared to 115 165 ha in September.

Eritrea	10 354 ha
Ethiopia	335 453 ha (estimated)
Iran	40 ha
Kenya	318 ha
Pakistan	220 ha
Saud Arabia	21 290 ha
Somalia	12 974 ha
Sudan	52 912 ha
Yemen	4 609 ha

Desert Locust Situation and Forecast

WESTERN REGION

MAURITANIA

• **SITUATION**

During October, small-scale breeding occurred in the west between Aguilal Faye (1827N/1444W), Tidjikja (1833N/1126W), and Akjoujt (1945N/1421W), and in the southeast near Oualata (1717N/0701W). Mature solitarious adults were seen copulating and solitarious hoppers of all instars, fledglings and immature adults were present. In addition, scattered mature solitarious adults were present in the south between Tamchekket (1714N/1040W) and Nema (1636N/0715W), and in Tagant, northern Brakna, Trarza, southwest Adrar, and Inchiri.

• **FORECAST**

Locust numbers and breeding will decline in the south but are likely to increase in the west and northwest where hoppers and adults may concentrate and form small groups.

Mali

• **SITUATION**

No reports were received during October.

• **FORECAST**

Small concentrations of adults may be present and persist in parts of the Adrar des Iforas.

Niger

• **SITUATION**

During October, small-scale breeding occurred on the northern Tamesna Plains near the Algeria border and Assamakka (1920N/0546E) and in the southeast Air Mountains along the Tafidet Valley (ca. 1809N/0926E) where mature solitarious adults and first instar hoppers were seen in the last week. A group of mature adults was also reported in Tafidet.

• **FORECAST**

Locust numbers will decline further on the Tamesna Plains as vegetation dries out. A few small adult groups may persist in southeastern Air Mountains.

Chad

• **SITUATION**

During October, small-scale breeding occurred and solitarious hoppers of all instars were present in central areas near Beurkia (1523N/1800E) in the centre and west of Fada (1714N/2132E) in the northeast. Low numbers of immature and mature solitarious adults were scattered mainly between Beurkia, Kalait (1550N/2054E) and Fada and, to a lesser extent, in the west near Mao (1406N/1511E) and in the east near the Sudan border and Iriba (1507N/2215E). In the last week, *transiens* adults were seen copulating near Fada.

• **FORECAST**

Locust numbers will decline as conditions dry out in central and northeastern areas.

Senegal

• **SITUATION**

No locusts were reported during 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, small-scale breeding occurred in the extreme south on the border of Niger southwest of In Guezzam (1934N/0546E) where hopper groups were seen in one area and scattered mature solitarious adults were present nearby. Isolated immature solitarious adults were seen in a few places west of Tamanrasset (2250N/0528E). No locusts were seen in the Adrar Valley (2753N/0017W) of the Central Sahara.

• **FORECAST**

Locust numbers will decline in the extreme south as vegetation dries out. No significant developments are likely.

Morocco

• **SITUATION**

During October, no locusts were seen during surveys carried out in the northern Western Sahara between Laayoune (2709N/1311W), Guelta Zemmur (2508N/1222W) and Smara (2644N/1140W), including Wadi Sakia El Hamra.

• **FORECAST**

No significant developments are likely.

Libya

• **SITUATION**

No reports were received during October.

• **FORECAST**

No significant developments are likely.

Tunisia

• **SITUATION**

No locusts were reported during October.

• **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

• **SITUATION**

During October, hatching and hopper band formation continued in the east between the Atbara River and the Red Sea Hills where fledging occurred during the last week, giving rise to immature adult groups. Although swarm laying was last reported on the 11th west of Haiya (1820N/3621E), mature adult groups laid in the Baiyuda Desert and near the Nile south of Abu Hamed (1932N/3320E) up to next two weeks later. Immature and mature solitarious adults and a few groups were present in North Kordofan while mature adult groups continued to appear west of the Red Sea Hills probably moving towards the coast. In the winter breeding areas, hopper bands were present on the Red Sea coast in the Tokar Delta (1827N/3741E) where some fledged and formed immature adult groups during the last decade. Scattered mature solitarious adults were seen further south near Karora (1745N/3820E). Scattered immature and mature solitarious adults were present in subcoastal areas of the northeast where a few adults were laying in Wadi Oko/Diib between Tomala (2002N/3551E) and Sufiya (2119N/3613E). Control operations treated 52 912 ha, of which 36 600 were by air.

• **FORECAST**

Locust infestations will decline in the summer breeding areas and west of the Red Sea Hills as adult groups move to the Red Sea coastal plains where they will mature and breed in the Tokar Delta and other areas that receive rainfall. Consequently, locust numbers will increase, and hopper groups could form. Small-scaler breeding is expected to continue in Wadi Oko/Diib.

Eritrea

• **SITUATION**

During October, hatching occurred in a few places in the western lowlands and adjacent highlands north of Kerkebet (1604N/3725E) that caused hopper groups to form. Breeding continued on the Red Sea coast from Tio (1441N/4057E) in the south to Mehimet (1723N/3833E) in the north. Hatching occurred near Sheib (1551N/3903E), south of Mehimet and, to a lesser extent, near Tio, causing hopper groups to form. At least one hopper band formed near Mehimet and a few hopper bands were present near Tio and south of Foro (1515N/3937E) from earlier breeding. During the last decade of the month, fledging near Sheib caused a few immature adult groups to form, and numerous immature swarms, up to 50 km2 in size, from adjacent areas of northern Ethiopia appeared in the highlands south of Asmara (1519N/3856E), continuing north to Anseba region. Ground teams treated 10 354 ha.

• **FORECAST**

Locust numbers should decline in the western lowlands but increase further on the Red Sea coastal plains where another generation of breeding will occur in areas that receive rainfall. Some swarms from northeast Ethiopia could appear early in the forecast period in the southern highlands and continue to the Red Sea coast.

Ethiopia

• **SITUATION**

During October, late instar hopper bands prevailed in the northern Rift Valley of the Afar region along a 450 km stretch of the eastern escarpment from south of Dese (1108N/3938E) to north of Mekele (1329N/3928E) and west of Semera (1148N/4100E), including parts of eastern Amhara and Tigray regions until mid-month. Smaller infestations were present in the Harar Highlands between Dire Dawa (0935N/4150E) and Jijiga (0922N/4250E). Substantial numbers of immature adult groups and swarms formed in both areas. Many of the immature swarms moved from Afar to the Somali region where they were seen in the Harar Highlands as well as further east towards Kebri Dehar (0644N/4416E) in the Ogaden. After mid-month, swarms from Afar nearly reached Addis Ababa (0901N/3845) while others moved south of Nazreth (0832N/3916E) in the Rift Valley, and northwest to eastern highland areas of Amhara and Tigray, reaching Axum (1407N/3843E) and the Eritrean border. Some of the swarms near Jijiga had matured, and a few swarms were seen copulating north of Dese and west of Dire Dawa. In the eastern Ogaden, mature groups and at least one swarm, which originated from infestations in central Somalia, laid eggs between Warder (0658N/4520E) and the Somali border from late September onwards. Hatching increased during the last week in Warder, Galadi and Bokh districts, and groups of hoppers had reached the third instar. By the end of the month, the situation improved in the north and northeast. Control operations reportedly treated 335 453 ha of which 127 334 ha were by air.

• **FORECAST**

Locusts will decline in the north and northeast as most of the swarms move to the Somali region while a few could move south in the Rift Valley. Cross border movements between Somalia are likely. Consequently, locust numbers will increase in the Somali region, particularly in eastern areas (Ogaden), as more laying, hatching and band formation occurs. A new generation of immature swarms are expected to form from late November onwards and move southwards to southern areas.

Djibouti

• **SITUATION**

During the first decade of October, scattered immature and mature solitarious adults persisted in the southwest near As-Eyla (1100N/4206E).

• **FORECAST**

A few groups and small swarms may appear at times from Yemen and transit through the country to Ethiopia and Somalia.

Somalia

• **SITUATION**

During October, the immature swarms that prevailed in the northeast between Garowe (0824N/4829E) and Gardo (0930N/4905E) matured, and many moved south to central areas of Mudug and Galguduud, reaching the northern part of Hirshabelle to the northeast of Belet Weyne (0444N/4512E) by mid-month and the coast north of Mogadishu (0202N/4520E) at the end of October. Although copulating swarms were seen southeast of Garowe and north of Dusa Mareb (0532N/4623E), widespread egg-laying is thought to have occurred over a large area between Gardo and Belet Weyne. Hatching and band formation commenced during the last week southeast of Garowe and Galkayo (0646N/4725E). In the northwest, a few immature swarms from adjacent areas of Ethiopia and perhaps Yemen were seen early in the month between Boroma (0956N/4313E) and Hargeisa (0931N/4402E), followed by more immature swarms after mid-month, some of which were maturing. Control operations using biopesticides treated 12 974 ha of which 10 414 ha were by air.

• **FORECAST**

Widespread hatching and band formation are expected to occur between Gardo and Belet Weyne, which could cause

substantial swarms to start forming from early December onwards that would move southwards. Smaller scale breeding is likely on the northwest plateau where hatching and band formation is expected in November. This could be supplemented by cross border swarm movements from adjacent areas of Ethiopia and low numbers of swarms coming from southern Yemen.

Kenya

• **SITUATION**

During October, a few small residual swarms were slowly maturing in the northwest where the counties of Baringo, Laikipia and Samburu come together some 125 km south of Lake Turkana. Aerial control operations treated 318 ha.

• **FORECAST**

Residual swarms in the northwest are expected to breed in favourable areas that will cause hatching and band formation from November onwards. This could be supplemented by a few swarms from Ethiopia and Somalia arriving at times in the northeast, which is likely to increase substantially from early December onwards as a new generation of swarms form in Ethiopia and Somalia.

Uganda

• **SITUATION**

During October, no locusts were reported in the northeast between Abim (0242N/3339E) and Moruita (0153N/3445E).

• **FORECAST**

There remains a low risk that a small swarm or two from adjacent areas of Kenya could stray into Karamoja where it is likely to disperse without breeding.

Egypt

• **SITUATION**

During September, isolated immature solitarious adults were seen at a few places on the Red Sea coast between Abu Ramad (2224N/3624E) and Halaib (2213N/3638E). No locusts were seen elsewhere on the coast and subcoastal areas north to El Sheikh El Shazly (2412N/3438E) and in the Lake Nasser area near Tushka (2247N/3126E), Abu Simbel (2219N/3138E) and Garf Husein (2317N/3252E). During October, small-scale breeding occurred in Wadi Diib to the west of Halaib near the Red Sea coast in the southeast where solitarious hoppers and immature solitarious adults were present. No locusts elsewhere along the Red Sea coast south of Marsa Alam (2504N/3454E), near Lake Nasser in the Tushka and Abu Simbel areas, and in the northwest near Salum (3131N/2509E).

• **FORECAST**

Locust numbers may increase slightly on the Red Sea coast in the southeast where breeding could occur in areas that receive rainfall.

Saudi Arabia

• **SITUATION**

During October, mainly late instar hopper groups and bands were present on the southern Red Sea coast north of Jizan (1656N/4233E) that fledged and formed groups of immature adults. Earlier instar hoppers, groups and bands were present between Qunfidah (1909N/4107E) and Lith (2008N/4016E) where hatching started at the end of last month. By the end of October, locust numbers were reported as declined along the coast. No locusts were seen north of Lith to Bader (2346N/3847E). Ground teams treated 21 290 ha.

• **FORECAST**

Mature adult groups are likely to form north of Jizan where another generation of breeding could commence from late November onwards. A few adult groups could also form north of Qunfidah and breed in December. Breeding is likely to extend to other coastal areas that receive good rains.

Yemen

• **SITUATION**

During October, late instar hopper bands persisted in the interior near Al Hazm (1610N/4446E) until about mid-month. Immature adult groups and swarms formed mainly near Al Hazm while immature adults and groups were present also from Bayhan (1452N/4545E) to Ataq (1435N/4649E), Mayfa'a (1416N/4735E), and Shabwah (1522N/4700E). Some swarms moved through the central highlands near Sana'a (1521N/4412E) towards the Red Sea coast while others were seen further flying south in the highlands east of Ibb (1358N/4411E) and Ad Dali (1341N/4443E), and near Al Baydha (1405N/4542E). On the Red Sea coast, hatching at the beginning of the month caused additional hopper bands to form in the north between Al Zuhrah (1541N/4300E) and Suq Abs (1600N/4312E) where late instar bands were already present that gave rise to immature adult groups and swarms. Scattered immature and mature adults were also present on the Tihama from Zabid (1410N/4318E) to Suq Abs. Ground teams treated 4 609 ha.

• **FORECAST**

Locust infestations will decline in the interior but increase on the Red Sea coast as another generation of breeding occurs, giving rise to more hopper bands and swarms. Breeding will also occur on the southern coast near Aden if rains fall.

Oman

• **SITUATION**

During October, isolated immature solitarious adults were present on the plateau near Thumrait (1736N/5401E) in the southern region of Dhofar early in the month. No locusts were seen elsewhere in Dhofar, eastern coastal areas, and in the north near Adam (2223N/5731E), Nizwa (2255N/5731E), Buraimi (2415N/5547E), and Rustaq (2323N/5725E).

• FORECAST

No significant developments are likely.

Bahrain, D.R. Congo, Iraq, Israel, Jordan, Kuwait, Lebanon, Palestine, Qatar, South Sudan, Syria, Tanzania, Turkey, and UAE

• FORECAST

No significant developments are likely.

EASTERN REGION

Iran

• SITUATION

During October, a small group of immature adults was seen on the 27th and 31st in the Bashagard Mountains north of Jask (2540N/5746E) near Gouharan (2636N/5753E) in Hormozgan province. These are likely to be remnants from earlier breeding. Ground teams treated 4 ha. No locusts were seen during surveys carried out in the southern provinces of Khuzestan, Kohgiluyeh, Bushehr, Fars, Hormozgan, Kerman, and Sistan-Baluchistan, and in the northeastern province of South Khorasan.

• FORECAST

Low numbers of adults may be present and will persist in parts of Hormozgan and Sistan-Baluchistan. No significant developments are likely.

Pakistan

• SITUATION

During October, a few mid-instar hopper groups were seen in Tharparkar south of Chachro (2507N/7015E) and along the Indus River near Hyderabad (2523N/6821E) at the beginning of the month. Scattered immature solitarious adults mixed with a few mature adults were present in Cholistan near Islamgarh (2751N/7048E). In the Lasbela Valley, a few immature adult groups were seen south of Uthal (2548N/6637E) on the 17th. Ground teams treated 220 ha. No locusts were seen elsewhere in Punjab, KP, Sindh, and in Baluchistan on the coast and in eastern interior.

• FORECAST

Locust numbers will continue to decline in summer breeding areas. A few small residual infestations may persist in Lasbela, and low numbers of adults may appear in Baluchistan. No significant developments are likely.

India

• SITUATION

During October, no locusts were seen during surveys in Rajasthan and Gujarat.

• FORECAST

No significant developments are likely.

Afghanistan

• SITUATION

No locust reports were received during October.

• FORECAST

No significant developments are likely.

Announcements

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 bulletins. 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

Calm (green) periods. Countries should report at least once/month and send RAMSES data with a brief interpretation.

Caution (yellow), threat (orange) and danger (red) periods. During locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent regularly every three days.

Bulletins. Affected countries are encouraged to prepare decadal and monthly bulletins summarizing the situation and share them with other countries.

Reporting. All information should be sent by e-mail to the FAO Desert Locust Information Service (eclo@fao.org and faodlislocust@gmail.com). Reports received by the first two days of the new month will be included in the FAO Desert Locust Bulletin; otherwise, they 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 upsurge and response

On 17 January, the Director-General of FAO activated the L3 protocols, the highest emergency level in the United Nations system, in FAO to allow fast-tracking an effective response to the upsurge in the Horn of Africa. See www.fao.org/locusts for more details.

New eLocust3 tools

FAO has developed three new free tools for improving Desert Locust survey and control reporting: eLocust3g, eLocust3m, eLocust3w (http://www.fao.org/ag/locusts/en/activ/DLIS/eL3suite/index.html). Each tool allows the recording of basic survey and control data in the field while offline that is shared within the country in real time.

Locust Hub

FAO in partnership with ESRI has developed a centralized hub for the latest Desert Locust data and progress on

the emergency response to the Desert Locust upsurge (https://locust-hub-hqfao.hub.arcgis.com).

Calendar

SWAC. 32nd session (virtual), 7–9 December 2020

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

Moderate
- 21–50 mm

Heavy
- more than 50 mm

Summer rains and breeding areas
- July–September/October
- Sahel of West Africa, Sudan, western Eritrea; Indo-Pakistan border

Winter rains and breeding areas
- October–January/February
- Red Sea and Gulf of Aden coasts; northwest Mauritania, Western Sahara

Spring rains and breeding areas
- February–June/July
- Northwest Africa, Arabian Peninsula interior, Somali plateau, Iran/Pakistan border

Other reporting terms

Breeding
- The process of reproduction from copulation to fledging

Recession
- Period without widespread and heavy infestations by swarms

Remission
- Period of deep recession marked by the complete absence of gregarious populations

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

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

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: Benin, Burkina Faso, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Sierre Leone and Togo

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, Lebanon, Palestine, Qatar, South Sudan, Syria, Tanzania, Turkey, UAE and Uganda

Eastern

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

Useful tools and resources

FAO Locust Watch. Information, maps, activities, publications, archives, FAQs, links
http://www.fao.org/ag/locusts

FAO/ESRI Locust Hub. Desert Locust maps and data download, and emergency response progress
https://locust-hub-hqfao.hub.arcgis.com

FAO regional commissions. Western Region (CLCPRO), Central Region (CRC), South-West Asia (SWAC)
http://www.fao.org/ag/locusts

IRI RFE. Rainfall estimates every day, decade and month
http://iridl.ldeo.columbia.edu/maproom/.Food_Security/.Locusts/index.html

IRI Greenness maps. Dynamic maps of green vegetation evolution every decade
http://iridl.ldeo.columbia.edu/maproom/Food_Security/Locusts/Regional/greenness.html

NASA WORLDVIEW. Satellite imagery in real time
https://worldview.earthdata.nasa.gov

Windy. Real time rainfall, winds and temperatures for locust migration
http://www.windy.com

eLocust3 suite. Digital tools for data collection in the field (mobile app, web form, GPS)
http://www.fao.org/ag/locusts/en/activ/DLIS/eL3suite/index.html

eLocust3 training videos. A set of 15 introductory training videos are available on YouTube
https://www.youtube.com/playlist?list=PLf7Fc-oGpFHEdv1jAPaF02TCfpcnYoFQT

RAMSESv4 training videos. A set of basic training videos are available on YouTube
https://www.youtube.com/playlist?list=PLf7Fc-oGpFHGyzXqE22j8-mPDhhGNq5So

RAMSESv4 and eLocust3. Installer, updates, videos, inventory and support
https://sites.google.com/site/rv4elocust3updates/home

FAOLocust Twitter. The very latest updates posted as tweets
http://www.twitter.com/faolocust

FAOLocust Facebook. Information exchange using social media
http://www.facebook.com/faolocust

FAOLocust Slideshare. Locust presentations and photos
http://www.slideshare.net/faolocust

eLERT. Online database of resources and technical specifications for locust emergencies
http://sites.google.com/site/elertsite

Desert Locust Summary
Criquet pèlerin – Situation résumée

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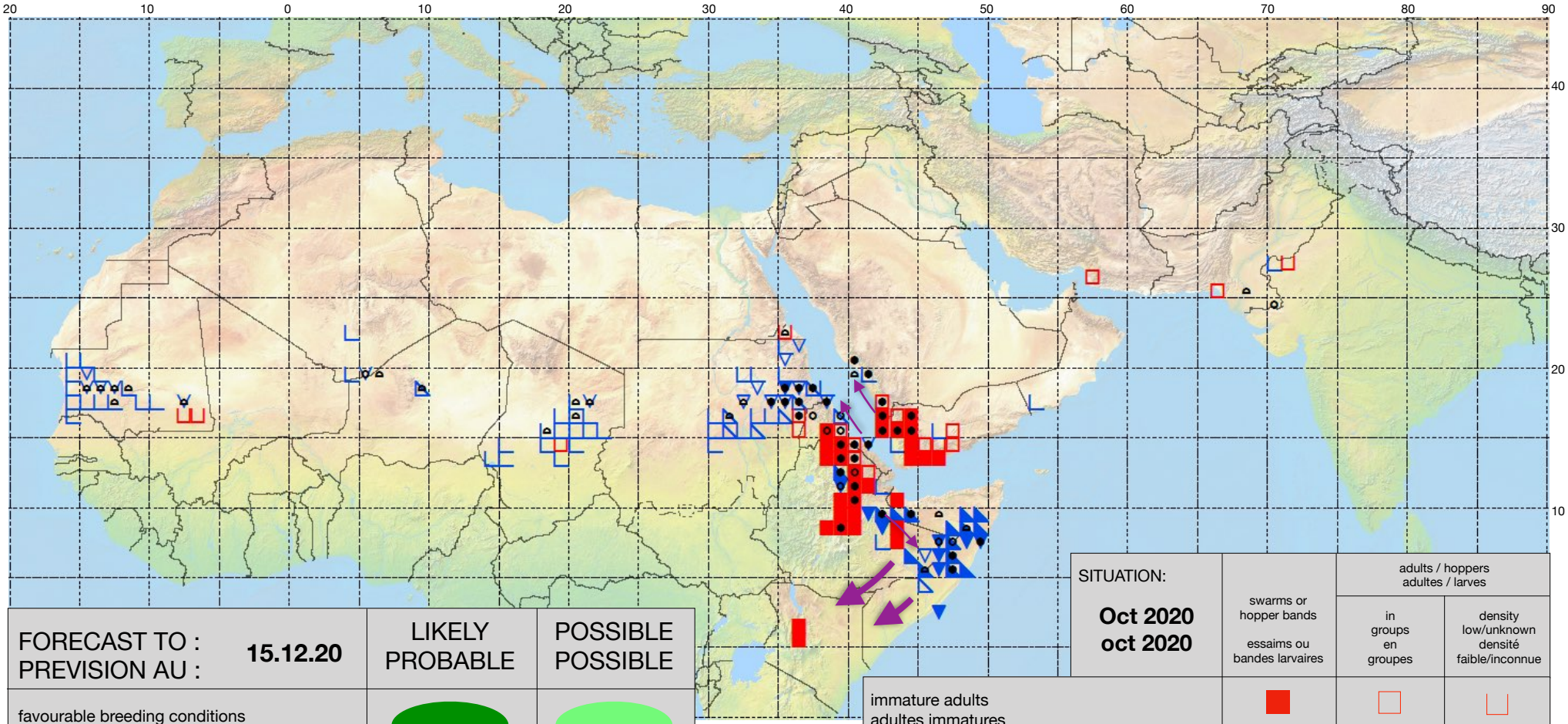

FORECAST TO : PREVISION AU : **15.12.20**	LIKELY PROBABLE	POSSIBLE POSSIBLE
favourable breeding conditions conditions favourables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarms(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: **Oct 2020** **oct 2020**	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 partially 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 example) larves et adultes (symboles combinés)	◘	◉	⊜