Food and Agriculture Organization of the United Nations

No. 496 3 FEBRUARY 2020

Desert Locust Bulletin

General situation during January 2020
Forecast until mid-March 2020

WESTERN REGION: CALM

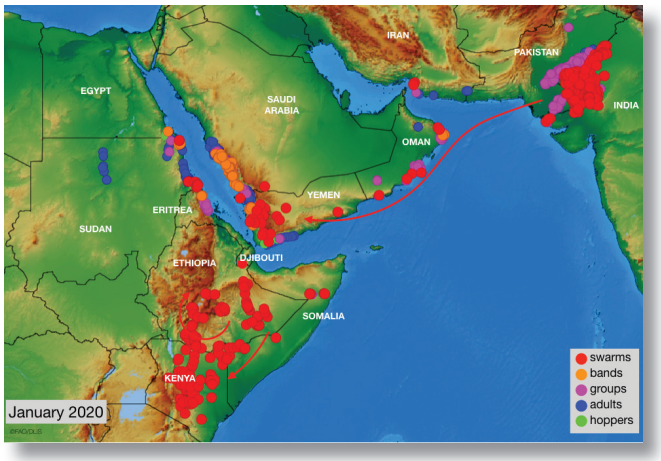
SITUATION. Scattered locusts in **Mauritania** (32 ha treated), northern **Mali** and southern **Algeria**.
FORECAST. Limited breeding possible in **Mauritania**, **Morocco**, **Algeria** and **Libya**.

CENTRAL REGION: THREAT

SITUATION. Control operations against hopper groups, bands and adult groups in **Oman** (2 128 ha) and on Red Sea coast of **Saudi Arabia** (44 311 ha), **Sudan** (18 714 ha), **Yemen** (15 465 ha), **Eritrea**, (15 068 ha), and **Egypt** (1 425 ha). Swarm laying in Sudan; immature swarms arrive in Oman, Yemen, **Djibouti** and Eritrea. Control operations against immature and maturing swarms in **Ethiopia** (22 550 ha), **Kenya** (20 000 ha estimated) and **Somalia** (15 000 ha estimated).
FORECAST. Swarm movement, maturation, egg-laying, hatching and band formation in **Ethiopia**, **Somalia** and **Kenya** with invasion threat to **South Sudan** and **Uganda**. Breeding to cause more groups, bands and swarms to form along both sides of the Red Sea with movements to interior of **Sudan**, **Saudi Arabia** and **Yemen**.

EASTERN REGION: THREAT

SITUATION. Control continued against residual groups and swarms in **India** (61 178 ha) and **Pakistan** (62 295 ha), and swarms that laid eggs in southern **Iran** (2 041 ha).
FORECAST. Hatching and band formation in southern **Iran**; breeding will start in southwest **Pakistan**.



Three hot-spots of threatening locust activity

The current situation remains extremely alarming in three main areas: (1) In the Horn of Africa, the worst affected area, there is an unprecedented threat to food security and livelihoods as swarms increased in Ethiopia and Somalia and continued to move south to Kenya where they spread to 14 northern, central and southwest counties, reaching within 200 km of northeast Uganda and southeast South Sudan. Some swarms have already laid eggs and hatching is almost certainly underway. Swarms also entered the Rift Valley in Ethiopia. Aerial and ground operations were in progress but remained insufficient. Breeding during February will cause a further increase with numerous hopper bands in all three countries. Some swarms may still reach Uganda and South Sudan. (2) Locust infestations continued to grow along both sides of the Red Sea where numerous hopper groups, bands and adult groups formed. A swarm formed on the coast near the Sudan/Egypt border, swarms laid near the Sudan/Eritrea border, and formed on the coast of Yemen, some of which moved into the central highlands and to adjacent areas in southwest Saudi Arabia. At least one swarm appeared on the southern coast of Eritrea. Several swarms, presumably from the Indo-Pakistan border area, arrived on the eastern coast of Oman and moved south to Yemen. (3) In southwest Asia, heavy rains fell on the southern coast of Iran where swarms were laying eggs, which should allow favourable conditions for two generations of breeding that could cause a considerable increase in locust numbers.

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.
Telephone: +39 06 570 52420 (7 days/week, 24 hr)
E-mail: eclo@fao.org / faodlislocust@gmail.com
Internet: www.fao.org/ag/locusts
Facebook/Twitter: faolocust

Weather & Ecological Conditions in January 2020

Breeding conditions remained favourable along both sides of the Red Sea and the Horn of Africa. Heavy rains fell in southern Iran. Dry conditions prevailed in the Western Region.

WESTERN REGION

Although no significant rain fell in the region during January, ecological conditions remained favourable for limited breeding in parts of northwest Mauritania (Inchiri and southwest Adrar), in some areas of central, eastern and southern Algeria (Adrar, Illizi, Djanet, Tamanrasset), and in southwest Libya (near Ghat). However, low temperatures will delay locust maturation. Elsewhere, annual vegetation remained sufficiently green for limited locust survival in parts of northern Mali (Timetrine and Adrar des Iforas), northern Niger (Air Mountains), and Morocco (Draa Valley).

CENTRAL REGION

Breeding conditions remained favourable in most coastal areas along both sides of the Red Sea where light to moderate rains fell at times. Conditions were also favourable on the southern coast of Yemen between Aden and Mukalla and on the eastern coast of Oman near Duqm and Sur. In the Horn of Africa, ecological conditions remained favourable for breeding in eastern Ethiopia and northeast Somalia due to heavy rains from cyclone Pawan in December. Light to moderate rains fell in southwest Ethiopia and in northern and central Kenya where conditions were also favourable for breeding.

EASTERN REGION

In southern Iran, breeding conditions were favourable some two months earlier than normal due to unusual winter rains, green vegetation and above-normal temperatures. This was supplemented by unusually heavy rains that fell along most of the southern coast during the first two decades of the month, including flooding in coastal and interior areas of Sistan-Baluchistan province in the southeast. Some areas received its entire annual rainfall in a single day. This should allow breeding conditions to remain favourable for two generations of breeding. Light showers fell in parts of Baluchistan in southwest Pakistan. Ecological conditions continued to dry out and temperatures were low, along the Indo-Pakistan border.

Area Treated

Control operations increased in January (246 477 ha) compared to December (187 943 ha).

Egypt	1 425 ha
Eritrea	15 068 ha
Ethiopia	22 550 ha
India	61 178 ha
Iran	2 041 ha
Kenya	20 000 ha (est.)
Mauritania	32 ha
Oman	2 128 ha
Pakistan	62 295 ha
Saudi Arabia	44 311 ha
Somalia	15 000 ha (est.)
Sudan	18 714 ha
Yemen	15 465 ha

Desert Locust Situation and Forecast

WESTERN REGION

Mauritania

• **SITUATION**

During the first half of January, scattered solitarious hoppers, fledglings, and immature and mature solitarious adults, including one immature adult group, persisted in the northwest between Bennichab (1928N/1525W) and Oujeft (2003N/1301W). Ground teams treated 32 ha up to 11 January.

• **FORECAST**

Small-scale breeding is likely to continue in the northwest in areas that remain favourable, which could cause a few small groups to form; however, low temperatures will delay hatching and locust maturation.

Mali

• **SITUATION**

During January, scattered solitarious immature and mature adults persisted on the western side of the Adrar des Iforas southwest of Tessalit (2011N/0102E) and in the Tilemsi Valley.

• **FORECAST**

Low numbers of adults will persist in a few places of the Adrar des Iforas, Tilemsi Valley and Timetrine.

Niger

• **SITUATION**

No reports were received during January.

• **FORECAST**

Low numbers of locusts may be present and are likely to persist in parts of the Air Mountains.

Chad

• **SITUATION**

No locusts were reported during January.

• **FORECAST**

No significant developments are likely.

Burkina Faso

• **SITUATION**

No reports were received during January.

• **FORECAST**

No significant developments are likely.

Senegal

• **SITUATION**

No locusts were reported during January.

• **FORECAST**

No significant developments are likely.

Benin, 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 January, scattered immature solitarious adults were present west of Tamanrasset (2250N/0528E) where breeding had occurred earlier. No locusts were seen in the Adrar (2753N/0017W) valley.

• **FORECAST**

Low numbers of locusts are likely to persist along the edge of the Hoggar Mountains near Tamanrasset and may be present near Illizi, Djanet, and agricultural areas in the central Sahara. Limited breeding could commence once temperatures start to warm up towards the end of the forecast period.

Morocco

• **SITUATION**

No locusts were reported during January.

• **FORECAST**

Low numbers of adults may appear in March along the southern side of the Atlas Mountains and breed on a small scale once rains occur.

Libya

• **SITUATION**

No reports were received during January.

• **FORECAST**

Low numbers of adults may persist in the southwest near Ghat where small-scale breeding could commence once temperatures start to warm up towards the end of the forecast period.

Tunisia

• **SITUATION**

No locusts were reported during January.

• **FORECAST**

No significant developments are likely.

CENTRAL REGION

Sudan

• **SITUATION**

During January, hopper groups and bands continued to form on the northern coast of the Red Sea south of the Egyptian border near Fodukwan (2145N/3644E). Fledging occurred, giving rise to a few immature adult groups and at least one immature swarm at the end of the month. Smaller-scale breeding is in progress in adjance subcoastal areas of Wadi Oko/Diib where groups of hoppers and immature and mature adults are present in a few places. Scattered mature solitarious adults are present in both areas. Swarms laid eggs in Tokar Delta (1827N/3741E) and on the coastal plain to Karora (1745N/3820E) and the Ertirean border, and hatching and band formation started in the last decade. Scattered solitarious adults were maturing along the coast from Port Sudan to Karora. In the northern Nile Valley, scattered immature and mature solitarious adults were present near Dongola (1910N/3027E). Control operations treated 18 714 ha of which 11 700 ha were by air.

• **FORECAST**

A few more groups and swarms will form on the northern coast, which are likely to move to the Nile Valley as vegetation dries out where breeding will occur with possible hatching and band formation starting about mid-March. More hatching and band formation will occur in Tokar and on the southern coast where new immature adult groups and swarms could start to form in early March.

Eritrea

• **SITUATION**

During January, first-generation late-instar hoppers and adults formed groups that were maturing on the Red Sea coast between Wekiro (1548N/3918E) and Embere (1628N/3856E), and laying was still occurring. A second-generation of hatching continued from Massawa (1537N/3928E) to south of Mehimet (1723N/3833E), giving rise to hopper groups and some bands. On the 20th, a swarm was seen near Assab (1301N/4247E) on the southern coast. Ground teams treated 15 068 ha up to 27 January.

• **FORECAST**

As second-generation breeding continues on the Red Sea coast, an increasing number of hopper groups and bands will form, giving rise to adult groups and swarms. A northwards movement along the coast can be expected if conditions start to dry out in March.

Ethiopia

• **SITUATION**

During January, numerous immature swarms were present within a large portion of the Somali region between Jijiga (0922N/4250E), Gode (0557N/4333E) and Warder (0658N/4520E). From the second week onwards, an increasing number of swarms moved towards the southwest to central and southern Oromiya region while other swarms remained in the Ogaden of the Somali region, some of which had matured. By mid-month, the swarms had extended as far south as the Kenya border from northwest of Moyale (Kenya) to the edge of the Rift Valley near Konso (0520N/3726E) and adjacent areas of eastern SNNPR region. There were also cross-border swarm movements. During the last week, swarms moved into the Rift Valley from the south to reach Awasa (0703N/3829E) and from the north to reach Nazreth (0831N/3915E). Aerial control operations treated 22 550 ha.

• **FORECAST**

Swarm movements are likely to occur in Somali, Oromiya and parts of SNNP regions, especially in the Rift Valley and reaching parts of the central highlands. This will be supplemented by cross-border swarm movements along the Somali and Kenyan border. Substantial breeding is expected to occur in Somali and Oromiya and, to a lesser extent in the Rift Valley, which will cause hopper bands to form.

Djibouti

• **SITUATION**

On 18–20 January, immature swarms were seen in the southeast interior near the Ethiopian border and Ali Sabieh (1109N/4242E) and on the coast south of Tadjourah (1147N/4253E).

• **FORECAST**

There is a low risk that a few groups and swarms may appear in the south and east from adjacent areas of eastern Ethiopia and northwest Somalia.

Somalia

• **SITUATION**

A late report indicated that hopper bands formed on the northwest coast between Lughaye (1041N/4356E) and Silil (1058N/4326E) during December. Scattered immature and mature solitairous adults and at least one mature group of laying adults were also present. On the 25th, an immature swarm was seen on the escarpment south of Silil. In the northeast, control operations were undertaken against hopper bands on the coast between Lasqoray (1109N/4811E) and Bosaso (1118N/4910E).

During January, control operations were carried out against laying swarms and early instar hopper bands on the northeast plateau near Garowe (0824N/4829E), treating an estimated 15 000 ha. In the south, swarms laid eggs in the south north of Garbahare (0320N/4213E) and near and the borders of Ethiopia and Kenya.

• **FORECAST**

In the northwest, breeding will cause locust numbers to increase along the coast. In the northeast, more hopper groups and bands will form as hatching continues on the plateau where new swarms could start forming by the end of the forecast period. In central and southern areas, egg-laying, hatching and hopper band formation are expected throughout the forecast period.

Kenya

• **SITUATION**

During January, large and numerous immature swarms contined to arrive from the north into the northeast near Mandera (0356N/4151E) and subsequently spread to 14 northern, central and southwest counties. On the 26th, a swarm reached the Rift Valley northwest of Kopedo (0111N/3606E). By the end of the month, immature swarms had reached as far south as Makueni county, and there were reports of locusts in Nairobi. Some swarms in the northern and central areas had become mature. Ground and aerial control operations treated an estimated 20 000 ha or more.

• **FORECAST**

Additional swarms will continue to arrive in the northeast from adjacent areas of Ethiopia and Somalia and spread in a westerly direction through northern and central areas. Movement further south will be limited due to headwinds. Breeding will cause a further increase in locust numbers with hatching and band formation during February and March.

South Sudan

• **SITUATION**

No locusts were reported during January.

• **FORECAST**

There is a high risk that a few small swarms will appear in the southeast from adjacent areas of southern Ethiopia and northern Kenya at any time in the coming few weeks; thereafter, the risk should decline.

Uganda

• **SITUATION**

No locusts were reported during January.

• **FORECAST**

There is a low risk that a few small swarms may appear in the northeast from adjacent areas of Kenya at any time in the coming few weeks; thereafter, the risk should decline.

Egypt

• **SITUATION**

During January, small-scale breeding continued in a few other areas between El Sheikh El Shazly (2412N/3438E) and the Sudanese border where scattered soliairous hoppers, and immature and mature solitarious adults were present. Late instar hopper groups and bands and immature adult groups were present in one area of the southeast along the Red Sea coast between Shalatyn (2308N/3535E) and Abu Ramad (2224N/3624E). No locusts were present near Lake Nasser and Tushka (2247N/3126E) while immature solitarious adults were seen near Sh. Oweinat (2219N/2845E). Ground teams treated 1 425 ha.

• **FORECAST**

Locust numbers will increase further on the Red Sea coastal plains in the southeast as breeding continues, giving rise to hopper and adult groups. A second generation of laying could start in February if conditions remain favourable, which would lead to a further increase in locusts.

Saudi Arabia

• **SITUATION**

During January, second-generation laying by adult groups continued early in the month in a few places along the Red Sea coast while, more importantly, hopper groups and bands increased substantially on the coast from south of Jeddah (2130N/3910E) to north of Jizan (1656N/4233E). As fledging occurred, an increasing number of immature adult groups formed. This was supplemented by a few immature swarms arriving from adjacent areas of Yemen on the 1st in the Farsan Islands off the coast of Jizan and on the 22nd near Najran (1729N/4408E). Control teams treated 44 311s ha of which 7 450 ha were by air. No locusts were seen on the northern Red Sea coast between Jeddah and Umm Lajj (2501N/3716E).

• **FORECAST**

Numerous immature adult groups and swarms will continue to form on the central and southern Red Sea coast. If conditions remain favourable, another generation of laying could commence from late February onwards; otherwise, groups and swarms are likely to move into the interior spring breeding areas although some movements could occur north along the coast especially if rains fall on the northern coast.

Yemen

• **SITUATION**

During January, numerous hopper bands persisted on the northern Red Sea coast between Al Zuhrah (1541N/4300E) and Suq Abs (1600N/4312E) and on the central coast near Hodeidah (1450N/4258E) and southwards from earlier breeding. Mainly mature adult groups were also present mixed with immature and mature solitarious adults. During the last decade, several immature swarms were initially seen near Hodeidah and then later in the highlands from Taiz (1335N/4401E) to south of Sada'a (1656N/4345E). Ground teams treated 15 465 ha. On the southern coast, solitarious hoppers, immature and mature solitarious adults, and hopper groups were present on the coast near Aden (1250N/4503E). On the 17th, an immature swarm arrived on the eastern coast near Sayhut (1512N/5115E) and a few immature swarms were seen in the interior near Marib (1527N/4519E) at the end of the month. There swarms may have come from Indo-Pakistan border via Oman.

• **FORECAST**

Breeding will continue on the Red Sea coast and cause a further increase in locust numbers that will give rise to hopper groups, bands, adult groups and swarms. Swarms will continue to move in the highlands and on the eastern coast towards the interior between Marib and Shabwah where they are likely to mature and breed in areas that receive good rains.

Oman

• **SITUATION**

During January, breeding continued on the eastern coast south of Ras Al Hadd (2232N/5948E) and near Duqm (1939N/5743E) where mainly late instar hopper groups and a few bands caused groups of immature and mature adults to form, some of which moved south of Duqm and were copulating. Mature groups also appeared north of Thumrait (1736N/5401E) in the southern interior. A few immature swarms probably from the Indo-Pakistan area arrived along the eastern coast south of Duqm on the 6th and 7th moving westwards, on the southern coast at Salalah (1700N/5405E) on the 14th, near Al Jazar (1856N/5702E) on the 20th, and northwest of Sur on the northeast coast during the last week. Ground teams treated 2 128 ha.

• **FORECAST**

Hatching and band formation is likely to occur in the Duqm area. As adults mature in the Sur area, further breeding could occur along the coast and extend to any northern or coastal areas that receive rainfall.

Bahrain, Iraq, Israel, Jordan, Kuwait, Lebanon, Palestine, Qatar, Syria, Tanzania, Turkey, and UAE

• **FORECAST**

No significant developments are likely.

EASTERN REGION

Iran

• **SITUATION**

During January, several adult groups and swarms laid eggs on the southeast coast in Hormozgan province between Minab (2708N/5705E) and Jask (2540N/5746E) where a few hoppers were already present. Solitarious immature adults were present near Pishin (2605N/6145E)and the border of Pakistan. Ground teams treated 2 041 ha. No locusts were reported elsewhere.

• **FORECAST**

Hatching and band formation is likely to occur in coastal areas of Hormozgan that is likely to give rise to immature swarms starting in March. Breeding will occur in coastal and interior areas of recent flooding in Sistan-Baluchistan that could potentially cause a dramatic increase in locust numbers.

Pakistan

• **SITUATION**

During January, a few third-generation hoppers continued to fledge and form immature groups in Nara Desert while immature adult groups persisted in Tharparkar, Nara and Cholistan deserts. Some of these groups and small swarms moved north of Bahawalpur (2924N/7147E). Cross-border movements continued, including a few immature swarms. On the 31st, immature adult groups reached Khyber Pakhtunkhwa near Dera Ismail Khan (3151N/7052E). Control operations treated 62 295 ha of which 2 100 ha were by air.

• **FORECAST**

Any residual adult groups or swarms along both sides of the Indo-Pakistan border will move towards areas of recent rainfall in Baluchistan where breeding will commence in favourable areas and give rise to hopper groups and bands.

India

• **SITUATION**

During January, numerous residual immature adult groups and swarms persisted in Rajasthan while some populations moved north to Suratgarh (2919N/7354E), southeast to Jalore (2520N/7237E), and south to northern Gujarat and the Rann of Kutch. This was supplemented at times by cross-border movements. Ground teams treated 61 178 ha.

• **FORECAST**

The majority of the residual summer-bred adult groups and swarms will move from Rajasthan and Gujarat west towards Baluchistan, Pakistan. Only low numbers of locusts are likely to remain in favourable areas.

Afghanistan

• **SITUATION**

No reports were received during January.

• **FORECAST**

There is a low risk that a few groups or small swarms from the Indo-Pakistan border may appear in southern areas.

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). Countries should report at least once/month and send RAMSES data with a brief interpretation.
Caution (yellow), threat (orange) and danger (red). During 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.
Bulletins. Affected countries are encouraged to prepare decadal and monthly bulletins summarizing the situation.
Reporting. All information should be sent by e-mail to the FAO/ECLO 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

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.

Condolences

It is with deep regret that we announce the death of Captain Shoaib Malik and Engineer Fawad Butt of the Federal Department of Plant Protection, Pakistan, who died in crash while undertaking aerial control operations against Desert Locust in Rahimyar Khan District on 12 January. We would like to express our sincere condolences to their families and government.

Calendar

The following activities are scheduled:

- **L3.** UN member states briefing on the locust infestations in the Horn of Africa, Geneva, Switzerland (3 February)
- **L3.** Desert Locust ministerial and partners briefing meeting, Addis Ababa, Ethiopia (7 February)

- **L3.** OCHA/FAO briefing on the locust upsurge in the Horn of Africa, UN Headquarters, New York, USA (10 February)
- **CLCPRO/DLIS.** Western Region Desert Locust Information Officer workshop, Dakar, Senegal (6–10 April)
- **CRC/SWAC/DLIS.** Central Region and SWAC Desert Locust Information Officer workshop, Cairo, Egypt (7–11 June)

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 Desert Locust 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 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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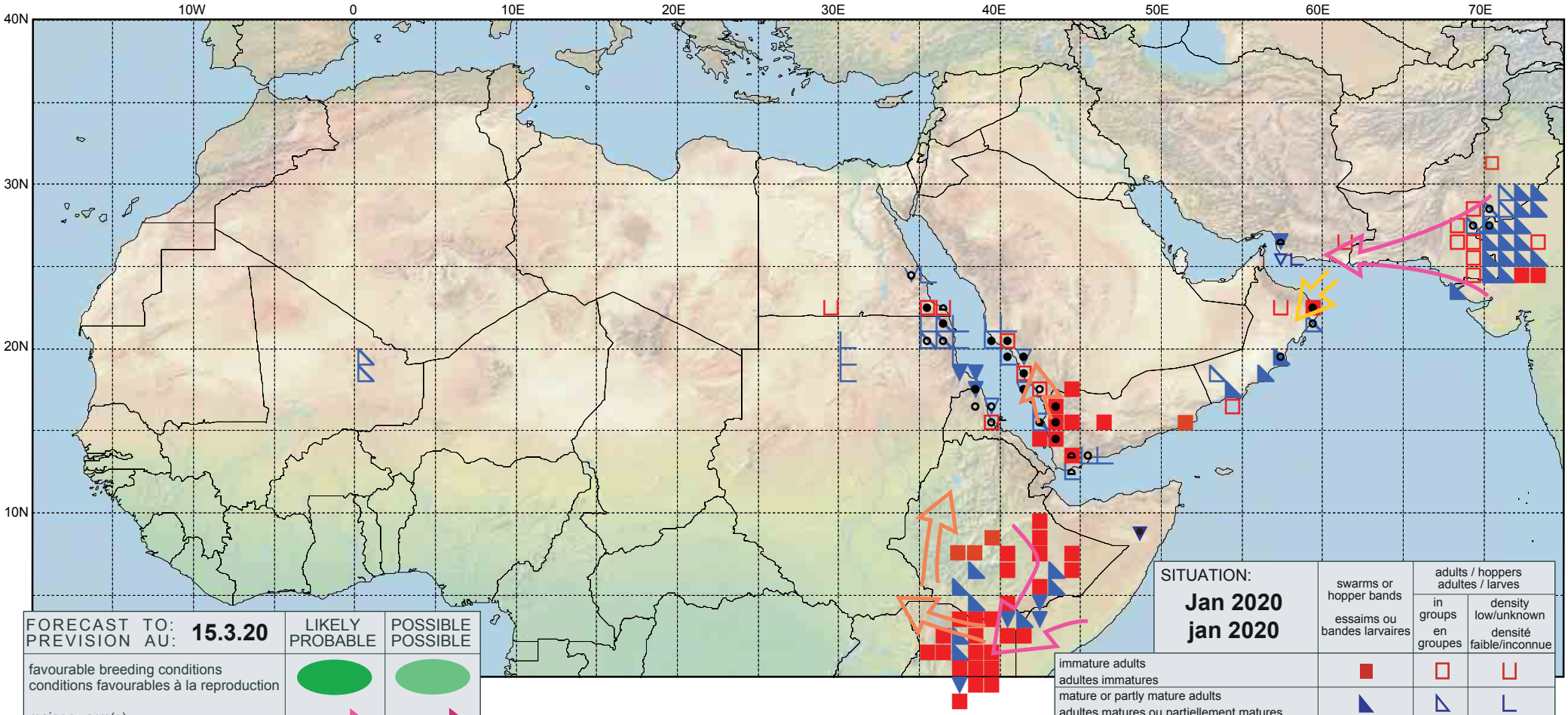

FORECAST TO: / PREVISION AU: **15.3.20**	LIKELY / PROBABLE	POSSIBLE / POSSIBLE
favourable breeding conditions conditions favourables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: **Jan 2020** **jan 2020**	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			
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)			