

**Emergency Transboundary  
Outbreak Pest (ETOP) Situation  
Update for April with a Forecast  
till mid-June, 2015**

## SUMMARY

The Desert Locust (SGR<sup>1</sup>) situation continued improving in winter breeding areas along the Red Sea coasts.

In **Sudan**, surveys detected low density scattered immature and mature adults in a few places in the central and southern Red Sea coastal areas during April. A similar situation was observed along the coasts of **Saudi Arabia** and **Eritrea**. The situation remained calm in **Yemen, Oman, Ethiopia, Somalia** and elsewhere in the central outbreak region.

The western outbreak areas - **Chad, Libya, Mali, Mauritania, Morocco, Niger** and **Tunisia** remained calm and only a few scattered solitary adults were reported in central Sahara in **Algeria** during April.

No locusts were observed in **India** or **Pakistan** and only a few scattered adults were detected in southeastern **Iran**.

**Forecast:** Small-scale breeding may occur in a few locations in spring

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<sup>1</sup> Definitions of all acronyms can be found at the end of the report.

breeding areas in northwest Africa, the interior of the Arabian Peninsula, southeast Iran and southwest Pakistan during the forecast period, but significant developments are not likely.

## OTHER ETOPS

### **Red (Nomadic) Locust (NSE):**

IRLCO-CSA controlled NSE hoppers and adults on 8,210 ha in Ikuu-Katavi and Lake Rukwa plains in **Tanzania** during April (IRLCO-CSA).

**Forecast:** Vegetation burning and dry weather will force locusts to form groups and swarms in **Tanzania** and perhaps, **Malawi, Mozambique** and **Zambia** during the forecast period (IRLCO-CSA).

### **Madagascar Migratory Locust (LMC):**

No update was received at the time this report was compiled; however, locust activities are expected to have continued during April.

**Moroccan (DMA), Italian (CIT), Asian Migratory (LMI) Locusts** in Central Asia and the Caucasus (CAC): No activities were reported in CAC region in April. As temperatures rise, hatching will continue and form bands and groups during the forecast period (OFDA-AELGA).

### **African Armyworm (AAW):**

Significant AAW outbreaks were not

reported in the IRLCO-CSA or DLCO-EA member states during April (IRLCO-CSA).

**Forecast:** AAW outbreaks will likely occur in **Kenya** and northern **Tanzania** during the forecast period (IRLCO-CSA, OFDA/AELGA).

**Quelea quelea (QQU):** QQU bird outbreaks were reported causing damage to rice and other small grain cereal crops in **Kenya** and **Tanzania** during April (IRLCO-CSA).

**Forecast:** QQU bird outbreaks will continue threatening small grain crops in **Kenya** and **Tanzania** during the forecast period (IRLCO-CSA, OFDA/AELGA).

*Active surveillance, monitoring and timely preventive interventions remain essential to avoid unexpected surprises in all ETOP breeding and outbreak countries. Invasion countries are advised to remain vigilant and execute essential preventive interventions as often as necessary to secure their crops and pasture*

**OFDA/TAG's** Plant Health and Pesticide unit (Assistance for Emergency Locust/ Grasshopper – Pest - Abatement) will continue monitoring ETOP situations closely, issue alerts and updates and provide advice as often as necessary. **End summary**

*Thanks to increased awareness among key national authorities and support*

*from key development partners, including USAID, key SGR frontline countries (FCs) in Sahel West Africa and Northern Africa, namely **Mali, Mauritania, Niger, Chad, Algeria, Libya, Morocco and Tunisia** have established autonomous national locust control unit responsible for all preventive SGR activities.*

### OFDA ETOP Activities and Benefits/Impacts

*Financial assistance from USAID/OFDA and other donors enabled FAO to establish an online Pesticide Stock Management System (PSMS) in more than 50 countries around the globe. Thanks to the PSMS system, participating countries can now maintain up to date inventories and make informed decisions to prevent unnecessary accumulations of obsolete pesticide stocks. This system has enabled many countries to prevent unnecessary procurement or hoarding of pesticides, avoid costly disposal operations, improve health and safety of their citizens and protect their shared environment.*

*The OFDA-sponsored tri-state program on scaling up community-based armyworm monitoring, forecasting and early warning (CBAMFEW) is on track. The program aims at reducing the threats of AAW to food security and livelihoods of vulnerable populations through improved information collection, analysis and reporting. (see picture of*

trainers training in Kenya on the right column)

*OFDA Advisor for Pesticides and Pests visited several localities in Ethiopia where CBAMFEW activities are being implemented. The advisor was pleased with farmer forecasters' ability to carry out project activities on their own.*

*The CBAMFEW project, being managed by DLCO-EA, is jointly implemented in more than 240 villages in 30 districts in three countries in close collaboration with partners in **Ethiopia, Kenya and Tanzania** – click [bit.ly/1C782Mk](http://bit.ly/1C782Mk) to view project sites in the three countries (this map is dynamic and work in progress and will be continuously updated with additional important data layers).*



*Photo courtesy: DLCO-EA*

*The CBAMFEW has successfully conducted several training programs, national, district and village meetings and workshops as well as launched an innovative mobile phone-based data collection and management technology. This innovative technology is being scaled up in Ethiopia and implemented in*

*Kenya and Tanzania. OFDA/TAG intends to work with other partners to expand this innovative technology to benefit other AAW affected countries.*

*OFDA continued its support for sustainable pesticide risk reduction initiatives through stewardship network (SPRRSN). This initiative is aimed at strengthening capacities of host-countries and partners to help reduce the risks of pesticide to safety of vulnerable populations and their assets as well as the environment.*

*OFDA/TAG has successfully launched two sub-regional SPRRSNs in Eastern Africa and the Horn. The Horn of Africa SPRRSN initiative has created an Association dubbed as Pesticide Stewardship Association-Ethiopia (PSA-E) and PSA-E is considered a model for future similar initiatives.*

*OFDA-TAG has plans to extend the SPRRSN initiative to other parts of Africa, the Middle East, CAC and other regions. In his recent visit, OFDA Senior Technical Advisor for Pesticides and Pests observed PSA-N activities in Ethiopia and noted progresses and constraints among beneficiaries.*

*OFDA continued its support for capacity strengthening programs through an agreement with FAO. This DRR program assists frontline countries to mitigate, prevent, and respond to ETOP outbreaks and reduce potential emergencies and help avoid misuse and mishandling of*

*pesticides, pesticide-incorporated materials and application platforms.*

*OFDA DRR program which is aimed at strengthening national and regional capacities for ETOP operations in Central Asia and the Caucasus (CAC) is on track. In addition to improving national and regional capacities, this program also promotes collaboration and coordination of joint monitoring, surveillance, reporting and preventive interventions to minimize ETOP threats to food security and livelihoods of vulnerable populations.*

**Note:** All ETOP SITREPs can be accessed on USAID/OFDA Pest and Pesticide Management website:

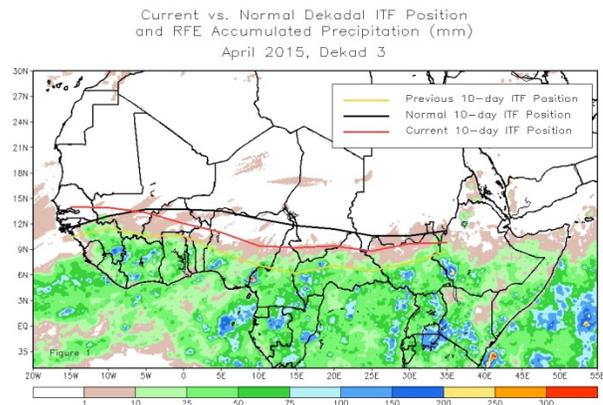
<http://www.usaid.gov/what-we-do/working-crises-and-conflict/responding-times-crisis/how-we-do-it/humanitarian-sectors/agriculture-and-food-security/pest-and-pesticide-monitoring>

*Detailed information on the ETOP situation, the weather and ecological conditions and forecast is provided hereafter.*

#### **Weather and ecological conditions:**

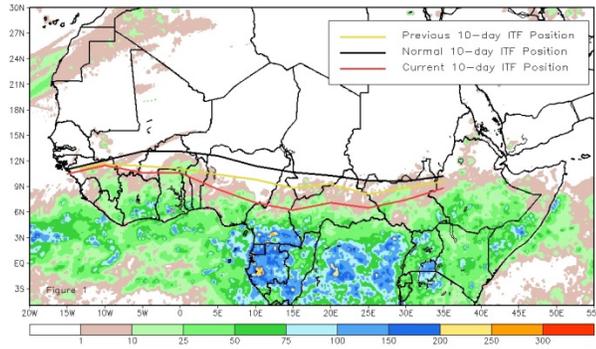
From 21-30, April 2015, the Intertropical Front (ITF) position remained well below the average for the 2nd consecutive dekad in many regions in western and eastern Africa. The western averaged position of the ITF (10W - 10E) was approximated at 11.9 N, lagging behind the climatological normal position (13.3N) by nearly 1.5 degrees, although a marked

improvement was observed in the far west over Senegal and western Mauritania compared to the previous dekad. Similarly, the mean eastern portion was approximated at 9.4N. Despite a considerable northward jump in late April compared to mid-April, the mean eastern position of the ITF is still lagging behind the normal position by 1.5 degrees, and 3.5 degrees compared to its position during this time last year (12.9). The below figures show concurrent positions of the ITF for the corresponding dekad relative to its climatological position during that dekad and its previous dekadal positions during the month.



From 11-20 April, ITF was positioned south of its previous position and long-term average position. The Front position in both the western (10W - 10E) and eastern (20E - 35E) portions lagged by more than 2 degrees behind the climatological position for this time of year. The unusual southward retreat of the ITF resulted in below-average rain across a wide swath of Africa from Liberia, Nigeria, to South Sudan. The map below, NOAA, April 2015, shows the current position of the ITF relative to its climatological position during the 2<sup>nd</sup> dekad of April and its previous position during the 1st dekad of April.

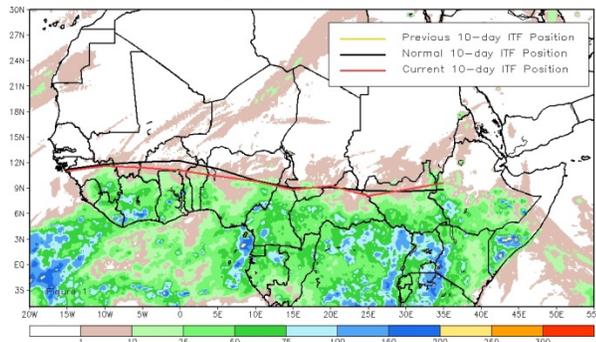
Current vs. Normal Dekadal ITF Position and RFE Accumulated Precipitation (mm) April 2015, Dekad 2



In Chad, light rain was recorded North of Tibesti and around Lake Chad and day time temperature briefly fell down to 24°C before it rose back to 40°C during the second dekad of April.

During the 1<sup>st</sup> dekad of the month, from April 1-10, the ITF moved northward across Africa and approached its climatological position for this time of the year.

Current vs. Normal Dekadal ITF Position and RFE Accumulated Precipitation (mm) April 2015, Dekad 1



The mean western portion of the Front was located around 10.9 N, slightly lower than its long-term average position of 11.5 N, attributed to stronger than The mean eastern portion of the Front was located at 8.9 N, barely north of its mean position of 8.8 N. This was partially attributed to the vigorous southerly flow which was accompanied by abundant rains over parts of Eastern Africa (see map below, NOAA, 4/2015).

Heavy rain was recorded near NSE outbreak areas in **Tanzania** during the first two weeks of April (see Table 1) (IRLCO-CSA).

Country	Station	Rainfall mm
Tanzania	Masenge (Wembere plains)	184.1
Tanzania	Kaliua (Malagarasi Basin)	229.5
Tanzania	Mpanda (Ikuu-Katavi plains)	98.3
Tanzania	Muze (Rukwa Valley Plain)	120.5
Malawi/ Mozambique	Ntanja (Lake Chilwa/ Lake Chiuta plains)	19.6
Mozambique	Caia (Dimba plains)	13
Mozambique	Mafambisse (Buzi-Gorongosa plains)	43

Vegetation remained green in most outbreak areas where the soil was moisture except in Wembere plains, **Tanzania**, where large areas were over grazed. Mild temperature prevailed heralding the beginning of cool and dry season in most NSE outbreak areas. Light rain was reported in Malawi, Mozambique, and Zambia during this month.

Significant meteorological activities were not reported in the eastern SGR outbreak areas or the CAC region during April.

**Note:** Changes in the weather pattern can contribute to ecological shift in ETOP habitats and increase the risk of pest outbreaks, resurgence and even emergence of new pests. Moroccan locust (DMA) which is normally a low to medium altitude pest has shown a considerable vertical habitat expansion by up to 1,000 feet or 300 meters from its normal ambient altitude in **Uzbekistan**. The **Asian migratory locust**, once a univoltin (a single generation per year)

*insect, recently began exhibiting two generations per year. These anomalous manifestations and phenomena are a serious concern to farmers, rangeland managers, crop protection experts and others. Regular monitoring and documenting anomalous manifestations in pest behavior and habitats and timely reporting remain critical. **End note.***

### Detailed Accounts of ETOP Situation and Forecast for the Next Six Weeks

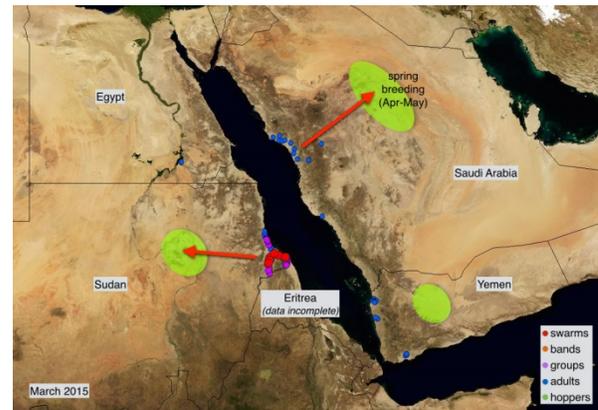
**SGR – Western Outbreak Region:** The SGR situation remained calm in **Chad, Libya Mali, Mauritania, Niger** and **Tunisia** during April. A few scattered solitary adults were reported in central Sahara in **Algeria** (CNLA/Chad, CNLCP/Mali, CNLA/Mauritania, CNLAA/Morocco CNLA/Niger, CNLA/Tunisia, NCDLC/Libya).

**Forecast:** Small-scale breeding may occur in spring breeding areas in **Algeria** and perhaps **Morocco** during the forecast period, but significant activities are not likely.

**SGR (Desert Locust) – Central Outbreak Region:** In **Sudan**, surveys were carried out in the central and southern Red Sea coastal area during April and detected low density scattered immature and mature adults in a few places south of Toker Delta between Aiterba and Aqiq. A similar situation was also observed on the Red Sea coasts in **Saudi Arabia** during April. The situation remained calm in **Yemen** and no locusts were reported in **Oman, Ethiopia, Somalia** or elsewhere in the central outbreak region during this month (PPD/Sudan).

**Forecast:** Small-scale breeding will likely occur in spring breeding areas in **Saudi Arabia** and perhaps **Yemen** but other countries in the central region will likely

remain relatively calm during the forecast period (DLMCC/Yemen, FAO-DLIS, LCC/Oman, PPD/Sudan).



SGR situation (FAO-DLIS, 4/2015).

**SGR - Eastern Outbreak Region:** The SGR situation remained calm in **India** and **Pakistan** and only a few isolated adults were observed in southeastern **Iran** during April.

**Forecast:** The SGR situation will remain relatively calm in the eastern outbreak region and only small-scale breeding will likely occur along the southeastern **Iran** and southwestern **Pakistan** borders during the forecast period.

**Red (Nomadic) Locust (NSE):** Mixed populations of immature adult swarmlets were detected in Ikuu and North Lake Rukwa plains during joint surveys in late March and April. Control operations treated more than 8,210 ha of hoppers bands and swarmlets using fenitrothion 96% ULV during this month. Low density (< 5 locusts/sq meter) adults and hoppers were reported in Ikuu and Wembere plains, Malagarasi Basin and Bahi Valley in **Tanzania** during April, but control operations were not necessitated. Hoppers are expected to have fledged and formed adults in Lake Chilwa/Lake Chiuta plains in **Malawi**, Buzi-Gorongosa plains in **Mozambique** and Kafue Flats in **Zambia**.

**Forecast:** Vegetation burning coupled with dry weather conditions will force locusts to concentrate during the forecast period. Low density locust populations that were not treated in the primary outbreak areas in **Tanzania** will form swarms. Small swarms will also likely form in **Malawi, Mozambique** and **Zambia**. IRLCO-CSA will undertake joint survey operations with national Ministries of Agriculture to confirm the situation and determine the needs (IRLCO-CSA).

*Frontline countries need to continue collaborating with the IRLCO-CSA and carry out intensive surveys to establish the status of NSE populations and ready for preventive and curative control interventions to avoid losses to crops and pasture.*

*Active surveillance, monitoring and preventive interventions remain critical to detect and abate the movement of hopper bands and swarms from breeding habitat and cause significant damage to crops and pasture.*

**Madagascar Migratory Locust (LMC):** No update was received at the time this report was compiled; however, locust activities are expected to have continued during April.

**Forecast:** Locusts will continue appearing and threatening food security and livelihoods of millions of chronically food-insecure people. **Italian (CIT), Moroccan (DMA) and Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC):** No update was received, however, locust activities are expected to have commenced in spring breeding areas (OFDA-AELGA).

**Forecast:** CAC region will likely experience increased locust activities during the forecast period (OFDA-AELGA).

*Italian, Migratory and Moroccan locusts are a constant threaten to the CAC region.*

*These pests can profusely multiply and attack tens of millions of hectares of cropping land pasture land and affect livelihoods of more than 20 million vulnerable rural inhabitants that eke a living primarily from farming and herding. With the ability to travel more than 100 km (60 miles) each day, these locusts can decimate dozens of hectares of cereal crops, pasture, cotton, fruit trees, leguminous plants, sunflower, tobacco, vineyard, vegetable and others over vast areas. Most of the countries affected by the three locust species are relatively new and lack the capacity to effectively prevent and control the pest (The once robust centralized pest control capacity in these countries disappeared with the downfall of the Soviet system leaving each country to fetch for itself).*

*Currently, USAID/OFDA is sponsoring a modes grant through the UN/FAO to help strengthen/build national and regional capacity to prevent and control the threats these notorious pests pose to vulnerable populations in these regions.*

**Timor and South Pacific:** No update was received from East Timor in April, but ETOP presence is likely.

**African Armyworm (AAW):** AAW outbreaks have ended in the southern outbreak region, but activities are expected to continue in the north-central outbreak regions in **Tanzania** and parts of **Kenya** (IRLCO-CSA, OFDA/AELGA).

**Forecast:** AAW outbreak will continue in **Kenya** and **Tanzania** during the forecast period IRLCO-CSA, OFDA/AELGA).

**Quelea (QQU):** QQU outbreaks were reported causing damage to irrigated rice crops in Busia, Kisumu, Taita Taveta, and Siaya counties in **Kenya**. Control operations treated the pest in Taita Teveta and other countries during April. The birds were also

reported attacking sorghum and irrigated rice in Morogoro and Shinyanga regions in **Tanzania** (IRLCO-CSA, OFDA/AELGA).

**Forecast:** QQU birds will likely continue posing a problem to small grain cereal growers (rice, sorghum, wheat) in **Kenya Tanzania** during the forecast period (IRLCO-CSA, OFDA/AELGA).

**Facts:** QQU birds can travel ~100 km/day looking for food. An adult QQU bird can consume 3-5 grams of grain and destroy the same amount each day. A medium density QQU colony can contain up to a million or more birds and capable of consuming and destroying 6,000 to 10,000 kg of seeds/ day, enough to feed 12,000-20,000 people/day.

**Rodents:** No update was received on rodents in April. However, the pest is a constant threat to crops and other products and requires active surveillance and preventive interventions to avoid major threats (OFDA/AELGA).

*Front-line countries must remain vigilant. Invasion countries should maintain regular monitoring. DLCO-EA, DLCCs, IRLCO-CSA, national PPDs, CNLAs, DPVs, ELOs, etc., are encouraged to continue sharing ETOP information with stakeholders as often and as early as possible. Lead farmers and community forecasters must remain vigilant and report ETOP detections to relevant authorities immediately.*

### **Inventories of Pesticide Stocks for ETOP Control**

Control operations were not carried out during April and pesticide inventories remained unchanged.

**Note:** Some of the data on pesticide inventories provided in the following table are not necessarily current due to the fact that some countries tend to issue updates after

activities are concluded and/or use pesticides for other pests. **End note.**

**OFDA/AELGA** encourages countries to continue exploring alternatives such as IPM to minimize and prevent risks associated with pesticide stockpiling. A judiciously executed triangulation of surplus stocks from countries with large inventories to countries where they are much needed is a win-win situation worth considering.

**Note:** A Sustainable Pesticide Stewardship (SPS) can considerably strengthen pesticide delivery system (PDS) at the national and regional levels. A strong PDS can effectively reduce pesticide related human health risks, minimize environmental pollution, increase food security and ultimately contribute to the national economy. An SPS can be effectively established by linking key stakeholders in neighbouring countries.

**End note.**

Table 1. ETOP Pesticide Inventory in Frontline Countries

<b>Country</b>	<b>Quantity (l/kg)<sup>\$</sup></b>
Algeria	1,190,000~ <sup>D</sup>
Chad	43,400
Eritrea	-16,897~
Ethiopia	-3,975~
Libya	25,000~
Madagascar	351,565~
Mali	32,000 <sup>D</sup>
Mauritania	43,400
Morocco	3,757,000~ <sup>D</sup>
Niger	75,800
Oman	14,440
Senegal	156,000~ <sup>D</sup>
Sudan	632,718~
Tunisia	36,575~
Yemen	22,000@ + 300 kg GM~

<sup>s</sup>Includes different kinds of pesticides in ULV, EC and dust formulations; ~ data not current; <sup>D</sup> = Morocco, Mauritania and Algeria donated/pledged 200,000, 25,000 I, and 30,000 I of pesticides to Madagascar in 2013; Mali donated 21,000 I for NSE to Malawi, Mozambique and Tanzania in 2012 and FAO facilitated the triangulation Mauritania donated 25,000 and 30,000 I of pesticides to Libya in 2012 and Madagascar in 2013; GM = *GreenMuscle*<sup>TM</sup> (fungal-based biological pesticide); @includes donations from Saudi Arabia

	<i>Western Region)</i>
CNLA(A)	<i>Centre National de Lutte Antiacridienne (National Locust Control Center)</i>
CRC	<i>Commission for Controlling Desert Locust in the Central Region</i>
CTE	<i>Chortoicetes terminifera</i>
DDLC	<i>Department of Desert Locust Control</i>
DLCO-EA	<i>Desert Locust Control Organization for Eastern Africa</i>
DMA	<i>Dociostaurus maroccanus</i>
DPPOS	<i>Department of Plant Protection and Quarantine Services</i>
DPV	<i>Département Protection des Végétaux (Department of Plant Protection)</i>
ELO	<i>EMPRES Liaison Officers</i>
EMPRES	<i>Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases</i>
ETOP	<i>Emergency Transboundary Outbreak Pest</i>
Fledgling	<i>immature adult locust /grasshopper that has pretty much the same phenology as mature adults, but lacks fully developed reproductive organs to breed</i>
GM	<i>GreenMuscle<sup>®</sup> (a fungal-based biopesticide)</i>
ha	<i>hectare (= 10,000 sq. meters, about 2.471 acres)</i>
IRIN	<i>Integrated Regional Information Networks</i>
IRLCO-CSA	<i>International Red Locust Control Organization for Central and Southern Africa</i>
ITCZ	<i>Inter-Tropical Convergence Zone</i>
ITF	<i>Inter-Tropical Convergence Front = ITCZ)</i>
FAO-DLIS	<i>Food and Agriculture</i>

### LIST OF ACRONYMS

AAW	<i>African armyworm (Spodoptera expempta)</i>
AELGA	<i>Assistance for Emergency Locust Grasshopper Abatement</i>
AFCS	<i>Armyworm Forecasting and Control Services, Tanzania</i>
AfDB	<i>African Development Bank</i>
AME	<i>Anacridium melanorhodon</i>
APLC	<i>Australian Plague Locust Commission</i>
APLC	<i>Australian Plague Locust Commission</i>
Bands	<i>groups of hoppers marching pretty much in the same direction</i>
CAC	<i>Central Asia and the Caucasus</i>
CBAMFEW	<i>Community-based armyworm monitoring, forecasting and early warning</i>
CERF	<i>Central Emergency Response Fund</i>
CIT	<i>Calliptamus italicus</i>
CLCPRO	<i>Commission de Lutte Contre le Criquet Pèlerin dans la Région Occidentale (Commission for the Desert Locust Control in the</i>

	<i>Organizations' Desert Locust Information Service</i>		<i>country with immediate need with the help of a third party in the negotiation and shipments, etc. Usually FAO plays the third party role in the case of locust and other emergency cases.</i>
<i>Hoppers</i>	<i>young, wingless locusts/grasshoppers (Latin synonym = nymphs or larvae)</i>		
<i>Kg</i>	<i>Kilogram (~2.2 pound)</i>		
<i>L</i>	<i>Liter (1.057 Quarts or 0.264 gallon or 33.814 US fluid ounces)</i>	<i>USAID</i>	<i>the United States Agency for International Development</i>
<i>LMC</i>	<i>Locusta migratoriacapito</i>	<i>UN</i>	<i>the United Nations</i>
<i>LMM</i>	<i>Locusta migratoria migratorioides (African Migratory Locust)</i>	<i>ZEL</i>	<i>Zonocerus elegans, the elegant grasshopper</i>
<i>LPA</i>	<i>Locustana pardalina</i>	<i>ZVA</i>	<i>Zonocerus variegatus, the variegated grasshopper (This insect is emerging as a fairly new</i>
<i>MoAFSC</i>	<i>Ministry of Agriculture, Food Security and Cooperatives</i>		<i>distractive dry season pest, largely due to the destruction of its natural habitat through deforestation, land clearing, for agricultural and other development efforts and from associated weather variability.)</i>
<i>MoARD</i>	<i>Ministry of Agriculture and Rural Development</i>		
<i>NCDLC</i>	<i>National Desert Locust Control, Libya</i>		
<i>NOAA (US)</i>	<i>National Oceanic and Aeronautic Administration</i>		
<i>NSD</i>	<i>Republic of North Sudan</i>		
<i>NSE</i>	<i>Nomadacris septemfasciata</i>		
<i>OFDA</i>	<i>Office of U.S. Foreign Disaster Assistance</i>		
<i>PHD</i>	<i>Plant Health Directorate</i>		
<i>PHS</i>	<i>Plant Health Services, MoA Tanzania</i>		
<i>PPD</i>	<i>Plant Protection Department</i>		
<i>PPSD</i>	<i>Plant Protection Services Division/Department</i>		
<i>PRRSN</i>	<i>Pesticide Risk Reduction through Stewardship Network</i>		
<i>QU</i>	<i>Quelea bird</i>		
<i>SARCOF</i>	<i>Southern Africa Region Climate Outlook Forum</i>		
<i>SGR</i>	<i>Schistoseca gregaria</i>		
<i>SWAC</i>	<i>South West Asia DL Commission</i>		
<i>TAG</i>	<i>Technical Assistance Group</i>		
<i>Triangulation</i>	<i>The process whereby pesticides are donated by a country, with large inventories, but often no immediate need, to</i>		

### **Who to Contact:**

If you have any questions, comments or suggestions, or know someone who would like to subscribe to this report, please, feel free to contact:

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