

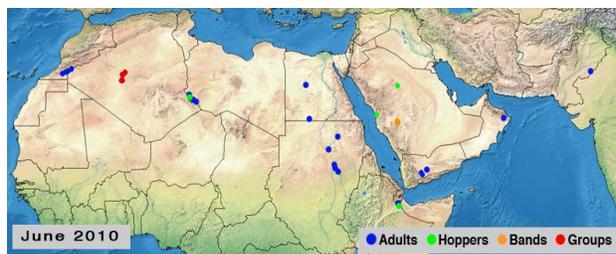
**Emergency Transboundary  
Outbreak Pest (ETOP) Situation  
Report for June with a Forecast  
till mid-August, 2010**

## Summary

The **Desert Locust (SGR<sup>1</sup>)**: The SGR remained calm in June with locust numbers showing a marked decline in spring breeding areas in Northwest Africa and the Arabian Peninsula due to timely preventive interventions and unfavorable ecological conditions. A mere combined total of 658 ha of hoppers and adults were treated in **Algeria, Morocco and Saudi Arabia** during this period. Small-scale breeding was reported in southwest **Libya**, Eastern **Ethiopia** and **Saudi Arabia** and scattered adults were detected in **Sudan, Yemen and Oman**. Other outbreak and invasion countries remained calm during this period (DDLC/Libya, DLCO-EA, DPPQS/India, DLMCC/Yemen, FAO-DLIS, INPV/Algeria, PPD/Ethiopia, PPD/Sudan)

**Forecast:** Ecological conditions will begin improving in the summer breeding areas in Sahel West Africa, the Central Region and along the Indo-Pakistan borders. This will likely cause small-scale breeding in areas of recent rainfall, but other areas will likely remain calm during the forecast period (DDLC/Libya, DLCO-EA, DLMCC/Yemen, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia, PPD/Sudan).

<sup>1</sup> Definitions of all acronyms can be found on the last pages of this report.



(adult locusts detected in several places, FAO-DLIS, 6/10)

## Other ETOPs

**Red Locust - NSE.** In Ikuu-Katavi plains of **Tanzania** some 12,500 ha were infested with low to medium density swarms. The International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA) and the **Tanzania** Ministry of Agriculture, Food Security and Cooperatives treated 5,400 ha. Isolated and scattered populations were reported in Buzi-Gorongosa and Dimba plains in **Mozambique** and large concentrations of adults were detected in Kafue Flats and Lukanga Swamps in **Zambia** (IRLCO-CSA).

**Forecast:** NSE will further concentrate on patches of green vegetation and form swarms following the seasonal grass burning and migrate to areas where control operations may not be practical. Escapee populations will likely persist and form potentially threatening populations in the coming seasons (IRLCO-CSA, OFDA/AELGA).

**Moroccan (DMA), Italian (CIT) and Migratory (LMI) locusts:** DMA hoppers and bands were treated on more than 373,000 ha in **Kazakhstan, Tajikistan** and **Uzbekistan** by May (no update was received at the time this report was compiled). Large DMA infestations that were reported in April in

**Georgia** began maturing and may have or will start laying eggs in the coming months. Laying may have or will also occur in **Kyrgyzstan** and **Tajikistan** where the current season will soon come to an end. Italian locust (CIT) was reported in **Kazakhstan** and **Georgia** and migratory locust (LMI) developed in **Kazakhstan** in May. Control operations commenced against CIT in **Georgia** but declined against DMA (FAO).

**Armyworm (*Spodopera exempta* - SEX):** SEX infestations continued in **Ethiopia** in June where more than 324,000 ha of pastureland and 345,900 ha of cropland were reported infested and some 194,000 ha were controlled since mid-April. Widespread infestations were also detected in southern **Eritrea** towards the end of June. SEX activities have ended in the IRLCO-CSA member-countries (AELGA, DLCO-EA, IRLCO-CSA).

**Forecast:** SEX will likely continue threatening crops and pasture in **Eritrea** but begin declining in **Ethiopia** during the forecast period. Vigilance and proactive interventions are essential. SEX activities will remain calm in IRLCO-CSA regions till November/December, 2010 (AELGA, DLCO-EA, IRLCO-CSA).

**Quelea (QQU):** QQU birds were detected in several regions in **Kenya** and **Tanzania** and aerial control operations were carried out by DLCO-EA and MoAs.

**Forecast:** QQU will likely remain a threat to small grain cereals and rice

growing regions in **Tanzania** and **Kenya**. The bird will also threaten irrigated winter wheat in **Zimbabwe** during the forecast period (IRLCO-CSA).

No update was received on locusts in **Timor Leste** or **Australia** at the time this report was compiled

**Rodents:** No update was received at the time this report was compiled.

**OFDA's** Assistance for Emergency Locust and Grasshopper Abatement (**AELGA**) will continue monitoring ETOP situations in all regions and issue updates and advices as often as necessary. **End summary**

#### Progress in SGR Frontline Countries:

SRG frontline countries (FCs) in Sahel West Africa, namely **Chad, Mali, Mauritania** and **Niger** have established autonomous national locust control units (CNLA) responsible for all DL activities.

Funds provided by the African Development Bank, the World Bank, USAID, France, FAO, host-governments, neighboring countries and others enabled the FCs to equip CNLAs with necessary tools, materials and infrastructure as well as train staff and technicians to prevent and respond to DL outbreaks and invasions and the threats they pose to vulnerable communities. The overhaul of the CNLAs is considered a significant improvement over the condition they were all in during and prior to the 2003-05 upsurges. It is worth noting that the CNLAs have since been able to avert a potentially devastating DL outbreak that began developing in **Mauritania** in 2009.

#### OFDA Pest & Pesticide Activities

- OFDA/TAG Advisor participated in a planning workshop for the second phase of the EMPRES Western Region Program in Dakar during the second week of March, 2010.
- OFDA/TAG continues its initiatives in pesticide risk reduction through stewardship network (PRRSN) to help prevent pesticide related disasters and ensure safety of vulnerable people as well as protect their assets and the environment against pesticide pollution. It is to be recalled that OFDA/TAG has so far successfully launched two sub-regional PRRSNs in Eastern Africa and the Horn. Discussions are underway to launch similar initiatives in **North Africa, Western Africa** and the **Middle East**. Potential partners will also be approached in **Eastern Europe, Central Asia, the Caucasus** as well as the **LAC** regions where OFDA/TAG intends to introduce similar initiatives.
- OFDA continues supporting capacity strengthening through FAO's EMPRES and pesticide disposal programs to mitigate, prevent and respond to DL emergencies and associated environmental risks.
- OFDA contributed to FAO's initiative to strengthen national and regional capacities in Central Asia and the Caucasus (CAC) to help coordinate locust monitoring and reporting among neighboring countries. The ultimate goal of the initiative is to prevent and mitigating locust threats and improve food security and livelihoods of vulnerable communities and OFDA will

continue its support for these initiatives.

**Detailed accounts of ETOP situation and activities as well as ecological and weather data across the various regions are presented below.**

**This SITREP and all others can be accessed on our website:**

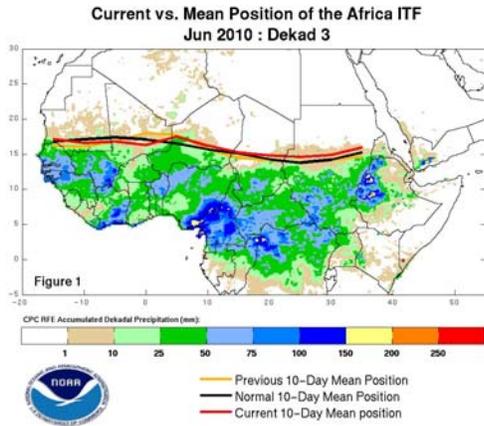
[http://www.usaid.gov/our\\_work/humanitarian\\_assistance/disaster\\_assistance/locust/](http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/)

### **Weather and ecological conditions**

The inter-tropical front (ITF) progressed during the third dekad of June in West and East Africa with the western mean position of 16.7N and the eastern position of 15.0N. Increased moisture was observed in Mali/Niger border in late June due to the northern migration of the ITF dictated by the strong southerly winds. The mean eastern portion of the ITF remains ahead of the climatological mean over many areas in Chad and Sudan (see figures) (NOAA).

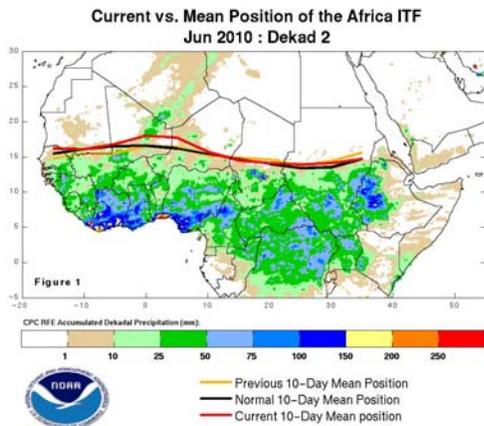
The mean position for the western portion of the Front was around 16.9N during the second dekad of June exceeding the climatological mean position of 16.2N for mid-June. This was attributed to increased southerly winds along the Prime Meridian that produced unusually heavy rains across **Mali and Niger**, extending as far north as southern **Algeria** during this period.

In **Sudan**, light rains were recorded in North & West Darfur and North Kordofan States during the last decade of June, but dry conditions prevailed in most of the summer breeding areas. Light to good rains were reported in eastern **Ethiopia** where locusts were detected during surveys carried out in June. The western lowlands of **Eritrea** remained hot and dry.



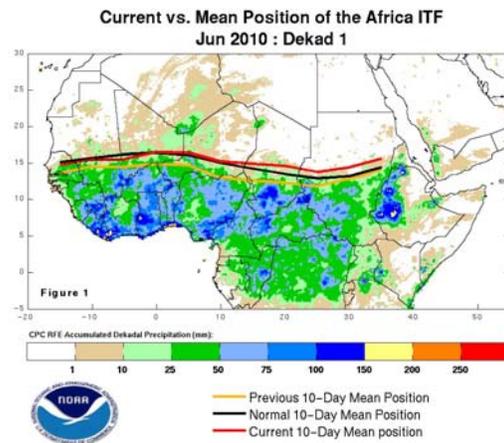
Light rain was recorded in a few places in Shabwah in **Yemen** from mid to late June, but ecological conditions remained unfavorable in most of the summer breeding areas in the country.

Vegetation started to dry in most of the NSE outbreak areas except in a few places, including the Kafue Flats and Lukanga Swamps of **Zambia** as well as Buzi-Gorongosa and Dimba plains **Mozambique** where flooding occurred. Moderate to heavy rains occurred in Jaisalmer, Churu in Bikaner Division, Bhuj in Gujarat Division during the second and third dekad of the month and ecological conditions will likely improve in these areas. Cool and dry weather conditions prevailed in most of the IRLCO-CSA member-countries (DLCO-CA, IRLCO-CSA, NOAA).



During the first dekad of June, the Front advanced further north over portions of the central and eastern Sahel regions with an

approximate mean position of 15.9N, a closest shift to the climatological mean position for this time of the year. This was due to an anomalous increase in southerly winds and followed by increased moisture over parts of **Mali** and **Niger** in early-June. The eastern portion of the ITF experienced a significant positional shift, and remained ahead of the climatological mean position, particularly in areas over central and eastern **Sudan** (see Figure)(NOAA).



**Note:** Changes in the weather pattern and the shift in the ecology of landscape are believed to exacerbate the risk of pest outbreaks and resurgence. Regular monitoring and reporting are essential at all times. **End note.**

**Detailed accounts of ETOP situations and activities**

**DL - Western Outbreak Region**

Locust numbers declined in the western outbreak region. Only 303 ha of scattered adults and 350 ha of adults and hoppers were treated in **Morocco** and **Algeria**, respectively. Isolated solitary mature and immature adults and scattered 2nd-6th instar hoppers and fledgling and copulating adults were seen during surveys carried out from mid-June in Nalut areas and east of Ghat in **Libya**, but no locusts were detected in Nalut. No locusts were reported in other

countries in the region during this period (DDLCO/Libya, FAO-DLIS, INPV/Algeria).

**Forecast:** Locust numbers will continue declining in spring breeding areas and residual adults will migrate to the summer breeding areas in northern Sahel. Small-scale breeding will likely commence in southern **Mauritania**, northern **Mali** and **Niger** and eastern **Chad** and numbers will likely increase in these areas, but significant developments are not expected during the forecast (DDLCO/Libya, FAO-DLIS, and INPV/Algeria).

### DL - Central Outbreak Region

Intensive ground surveys covered more than 34,550 ha in **Sudan** during the 2nd and 3rd dekads of June. Very sparse adult locusts were detected in 125 ha in River Nile and Northern States in **Sudan** during this time and isolated adults were seen in Western Desert in **Egypt**. Low density scattered copulating adults were detected on some 142 ha during surveys carried out near Dire Dawa in eastern **Ethiopia**. No locusts were seen during surveys carried out in northern **Somalia** near Hargeisa in June. Hopper bands were controlled on 5 ha in the interior of **Saudi Arabia** in June. Surveys covered 8,340 ha in Marib, Al Jawf, Shabwah and Hadhramout governorates in **Yemen** and 55 ha were reported infested with low density scattered immature and mature adults in western Shabwah. Scattered adults were reported in **Oman** where unusually heavy rain followed Cyclone Phet that made a landfall in northern part of the country (Phet also made a land fall in **Iran** and **Pakistan** bringing with it abundant moisture)(DLCO-EA, DLMCC/Yemen, FAO-DLIS, PPD/Ethiopia, PPD/Sudan).

**Forecast:** Small-scale breeding is expected in areas of recent rainfall between Bayhan and Ataq in Shabwah in

**Yemen.** A similar situation may occur in eastern **Ethiopia** where copulating adults were detected during surveys carried out in June. In **Sudan**, locust numbers will likely increase in areas where rains were reported and patches of green vegetation persisted, however, significant developments are not likely during the forecast period. Regular surveys and monitoring must be maintained in these areas to avoid any surprises (DLCO-EA, DLMCC/Yemen, FAO-DLIS, OFDA/AELGA, PPD/Ethiopia, PPD/Sudan).

### DL- Eastern Outbreak Region

A few scattered adults were seen in **Pakistan** near the **India** border. No locusts were detected during surveys carried out in **Iran** as well as Jodhpur, Jaisalmer, Barmer, Bikaner, Phalodi, Jalore, Nagaur, Suratgarh, Churu, Bhuj and Palanpur of the Scheduled Desert Area (SDA) of Rajasthan and Gujarat States **India** (DPPQS/India, FAO-DLIS).

**Forecast:** Ecological conditions will gradually improve in the summer breeding areas along the **Indo-Pakistan** border causing small-scale breeding and numbers slowly increasing. However, significant activities are not expected during the forecast period (DPPQS/India, FAO-DLIS).

**Red Locust (NSE):** NSE survey and control operations were undertaken in June in Ikuu-Katavi plains of **Tanzania** against scattered low to medium density swarms over 12,500 ha. 5,400 ha were reported sprayed with Fenitrothion 96% and Sumicombi Alpha (Fenitrothion + esfenvalerate). Further operations were hampered by scarce resources and 1,100 ha of flooded areas and near river banks were left unsprayed due to fear of contamination by pesticides and for lack of *Metarhizium* (Green Muscle), a biopesticide suitable for sensitive habitat. An estimated 7,100 ha in Ikuu-Katavi plains still requires control to prevent swarms from escaping to adjacent areas. Surveys will

continue in other outbreak areas in Rukwa, Malagarasi and Wembere plains where nearly 13,400 ha will need to be treated by July 2010.



Red Locust swarm seen on grasses near northern tree line in **Ikuu plain**, April 29, 2010 (source: IRLCO-CSA)

**Forecast:** As grass burning intensifies over the coming several weeks, more locusts will concentrate on patches of green vegetation and form swarmlets and migrate to other areas where control operations may not be practical. Escapee locusts in primary outbreak areas in **Tanzania** where control operations were hampered by lack of resources and due to sensitive habitat, will persist and likely form large swarms that will migrate and become potentially threatening in the coming season (IRLCO-CSA, OFDA/AELGA).

### Madagascar Migratory Locust:

No update was received on the locust situation in **Madagascar** during this time, but it is likely that the pest has continued laying eggs which will hatch during the spring breeding season.

**Moroccan** (*Dociostaurus maroccanus* - DMA), **Italian Locusts** (*Calliptamus italicus* – CIT), Migratory locust, **Locusta migratoria** (LMI) in **CAC**: A late received report indicated that DMA started hatching in Central Asia as of mid-March and by the first week of May, hoppers and bands were

treated on more than 373,000 ha in **Kazakhstan, Tajikistan and Uzbekistan and Turkmenistan**. More than 14,000 ha were reported infested with DMA in April in **Georgia** near the border with **Azerbaijan** and a similar situation may have existed in **Afghanistan**. Italian locust (CIT) was reported in **Georgia** and **Kazakhstan** and migratory locust (LMI) developed in **Kazakhstan** in May. DMA will likely continue maturing and laying eggs in **Georgia, Kyrgyzstan and Tajikistan** where breeding season will likely come to an end during the forecast period. CIT and LMI will continue hatching and hoppers will continue developing and require control operations in **Georgia** and **Kazakhstan** where thousands of ha have been treated against CIT. Survey and control operations were in progress in the region at that time.



(map of locust prone CA countries, FAO)



PL)

Australian Plague Locust (A

No update was received at the time this report was compiled. However, it is likely that APL continue being a problem in several areas in the country.



(Australian plague locust, source: APLC)

### The Timor and South Pacific

No update was received in June, but it is likely that grasshoppers and locusts continue to be active.

**Armyworm:** SEX infestations were reported in Oromyia, SNNPR, DireDawa, Somali, Gambela, Harari, Amhara, Benshangul and Tigray regions of **Ethiopia** during the reporting period. More than 324,000 ha of pastureland and 345,900 ha of cropland were reported infested as of now. Ground control operations controlled more than 137,300 ha of grazing land with pesticides and 56,674 ha using cultural methods. The pest was first detected in mid-April, 2010 in **Ethiopia** and continued through July. A late received report indicated that widespread SEX infestations were detected in several districts in southern **Eritrea** towards the end of June. MoA and affected farmers started ground control operation in all infested areas in Areza, Mendefera, Dekemhare, Mai Mine, Emni Haili and Debarwa (DLCO-EA,).

**Forecast:** SEX infestations will likely continue threatening crops and pasture in **Ethiopia** and **Eritrea** during the forecast period. SEX operators and forecasters are encouraged to remain vigilant, implement proactive interventions and share

information with partners as regularly as possible (DLCO-EA, OFDA/AELGA).

**Quelea (QQU):** DLCO-EA and MoAs controlled tens of millions of QQU birds in June in Mbeya, Morogoro and Singida regions in **Tanzania** and in Narok East District in **Kenya**. DLCO-EA provided aerial support and MoAs provided avicides. QQU roosts were also reported in Mbeere District in the Eastern Province and Nyanza Province in **Kenya**. Surveys will be carried out to confirm the reports. The situation was relatively calm in **Malawi, Mozambique, Zambia, and Zimbabwe** (IRLCO-CSA)



(A QQU roost, a file photo from the free encyclopedia)

**Forecast:** QQU birds will likely continue to threaten small grain cereals in Nyanza and Rift Valley Provinces of **Kenya**, maturing rice crops in Morogoro, Singida and Mbeya regions of **Tanzania**, irrigated winter wheat crops in the south-eastern and central parts of **Zimbabwe** and in other countries during the forecast period.

**Facts:** QQU birds can travel ~100 km/day looking for food. Each bird can consume 3-5 g of grain and perhaps destroy the same amount each day. A colony composed of a million birds (very common) is capable of consuming and destroying 7-10 tons of seeds/day (enough to feed 15,000-20,000 people for a day).

**Rodents:** No update was received at the time this report was compiled, but the pest remains a threat to both pre-harvest as well as post-harvest crops and produces. Barn owl, *Tyto alba*, is one of nature's biological means of controlling this pest.

Front-line countries are advised to remain vigilant. Countries in the invasion zones should maintain the capacity to avoid any unexpected surprises. DLCO-EA, IRLCO-CSA, national PPDs, CNLAs, DPVs and ELOs are encouraged to continue sharing information with partners and other stakeholders as rapidly and as often as possible.

### Acridid Pesticide Stocks

Very limited control operations were conducted in **Algeria**, **Morocco** and **Saudi Arabia** during this period and the inventory did not change much except for **Ethiopia** and **Sudan** that have reported higher numbers during this month. It is possible that these countries procured additional quantities of pesticides to control SGR and other pests, e.g., SEX, GH, etc.

The likelihood of some of the pesticides listed in the below box becoming obsolete increases by the day. Mindful of this, ETOP-prone countries, particularly those with large stocks, are encouraged to regularly test their stocks and determine whether they should retain, use, share or discard them immediately. All options should be explored to avoid the huge environmental and financial costs associated with obsolete pesticides. A judiciously executed pesticide triangulation is a double-edged and safer alternative that can be considered.

**Note:** The core message of **pesticide stewardship networking** is to strengthen the national and regional pesticide delivery systems, reducing pesticide related health risks and contributing to the safety of

vulnerable communities, protecting their assets and environment, improving food security and ultimately contributing to the national economy. **End note.**

Country	Quantities in l/kg <sup>\$</sup>
Algeria	1,800,000~
Chad	108,085~
Eritrea	44,800~
Ethiopia	33,500
Libya	Data not available
Mali	209,000%~
Mauritania	480,000~@
Morocco	4,104,997~
Niger	28,240+
Senegal	519,000~
Saudi Arabia	Date not available
Sudan	827,534 <sup>m</sup>
Tunisia	167,600~
Yemen	44,700 + 527 kg BC

\$These quantities include ULV, EC and dust formulations  
~ data not necessarily current  
% Mali donated 21,000 l for RL in Malawi, Mozambique and Tanzania late last year and FAO facilitated the triangulation  
+ quantity reported in Agadez left-over stocks of Chlopyrifos from the 2003-DL campaign was tested for quality and found to be usable through 2012  
<sup>m</sup> This includes EC, ULV and Dust for all crop protection uses

### List of Acronyms

AELGA	Assistance for Emergency Locust Grasshopper Abatement
AME	Anacridium melanorhodon
APL	Australian Plague Locust
APLC	Australian Plague Locust Commission
CAC	Central Asia and the Caucasus
CERF	Central Emergency Response Fund
CIT	Calliptamus italicus
CLCPRO	Commission de Lutte Contre le Criquet Pèlerin dans la Région

	<i>Occidentale (Commission for the Desert Locust Control in the Western Region)</i>	<i>LMI</i>	<i>Locusta migratoria</i>
		<i>LPA</i>	<i>Locustana pardalina</i>
<i>CNLA/CNLAA</i>	<i>Centre National de Lutte Antiacridienne (National Locust Control Center)</i>	<i>MoAFSC</i>	<i>Ministry of Agriculture, Food Security and Cooperatives</i>
		<i>MoARD</i>	<i>Ministry of Agriculture and Rural Development</i>
<i>CRC</i>	<i>Commission for Controlling Desert Locust in the Central Region</i>	<i>NOAA</i>	<i>National Oceanic and Aeronautic Administration</i>
<i>CTE</i>	<i>Chortoicetes terminifera</i>	<i>NSE</i>	<i>Nomadacris septemfasciata</i>
<i>DDLC</i>	<i>Department of Desert Locust Control</i>	<i>OFDA</i>	<i>Office of U.S. Foreign Disaster Assistance</i>
<i>DL</i>	<i>Desert Locust</i>	<i>PHD?S</i>	<i>Plant Health Directorate/ Services</i>
<i>DLCO-EA</i>	<i>Desert Locust Control Organization for Eastern Africa</i>	<i>PPD</i>	<i>Plant Protection Department</i>
		<i>PPSD</i>	<i>Plant Protection Services Division/Department</i>
<i>DMA</i>	<i>Dociostaurus maroccanus</i>	<i>PRRSN</i>	<i>Pesticide Risk Reduction through Stewardship Network</i>
<i>DPPQS</i>	<i>Department of Plant Protection and Quarantine Services</i>	<i>QQU</i>	<i>Quelea quelea</i>
		<i>SEX</i>	<i>Spodoptera exempta</i>
<i>DPV</i>	<i>Département Protection des Végétaux (Department of Plant Protection)</i>	<i>SGR</i>	<i>Schistoseca gregaria</i>
		<i>SWAC</i>	<i>South West Asia DL Commission</i>
<i>ELO</i>	<i>EMPRES Liaison Officers</i>	<i>TAG</i>	<i>Technical Assistance Group</i>
<i>EMPRES</i>	<i>Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases</i>	<i>USAID</i>	<i>Unites States Agency for International Development</i>
		<i>UN</i>	<i>the United Nations</i>
<i>ETOP</i>	<i>Emergency Transboundary Outbreak Pest</i>		
<i>ha</i>	<i>hectare (= 10,000 sq. meters)</i>		
<i>IRIN</i>	<i>Integrated Regional Information Networks</i>		
<i>IRLCO-CSA</i>	<i>International Red Locust Control Organization for Central and Southern Africa</i>		
<i>ITCZ</i>	<i>Inter-Tropical Convergence Zone</i>		
<i>ITF</i>	<i>Inter-Tropical Convergence Front = ITCZ)</i>		
<i>FAO-DLIS</i>	<i>Food and Agriculture Organizations' Desert Locust Information Service</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>		

To learn more about our activities and the programs we support, please, visit our website at:

[http://www.usaid.gov/our\\_work/humanitarian\\_assistance/disaster\\_assistance/locust/](http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/)

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