

**Emergency Transboundary  
Outbreak Pest (ETOP) Situation  
Report for June with a Forecast  
till mid-August, 2011**

## Summary

Desert Locust (SGR) infestations declined during June in the primary breeding and outbreak areas in the Sahel, North Africa and Red Sea coasts due to control operations and unfavorable ecological conditions.

Ground operations controlled residual populations in some 900 ha on the Red Sea coast in Saudi Arabia. Locusts were not seen moving into the interior of the country or Yemen, but scattered adults appeared in the summer breeding areas of northern Sudan. An unconfirmed report indicated the presence of a small group of solitary hoppers near Hargeisa in northern Somalia. A small swarm was controlled in southeast Iran and localized infestations were treated in western Pakistan. Scattered adults appeared in the summer breeding areas along both sides of the Indo-Pakistan border. Hoppers were reported in Jaisalmer, India but it was not clear if they were SGR or other grasshoppers.

Local infestations were treated in Algeria and southwestern Morocco. Scattered adults appeared on the Tamesna Plains in Niger (CNLA/Mauritania, CNLAA/Morocco, DLCO-EA, DPPQS/India, FAO-DLIS, INPV/Algeria, and PPD/Sudan).

**Forecast:** More adults will appear in the summer breeding areas. Locust numbers will likely increase slightly due

to small-scale breeding, especially in Tamesna, Niger, but significant developments are not expected during the forecast period. Nevertheless, active surveillance and preventive interventions should be maintained to avoid unexpected surprises (CNLA/Mauritania, CNLAA/Morocco, DLCO-EA, DPPQS/India, FAO-DLIS, INPV/Algeria, and PPD/Sudan).

## Other ETOPs

**Red (Nomadic) Locust (NSE):** Survey and control operations were concluded in Tanzania. Of the 14,276 ha surveyed, 4,060 ha were treated in Wembere plains. NSE populations persisted in Mozambique, along the borders of Malawi and Mozambique, and in Zambia. Survey and control operations will be undertaken in these areas in July/August 2011 as necessary (IRLCO-CSA).

**Madagascar Migratory Locust (LMC):** The LMC campaign that commenced in October 2010 was concluded by mid-June. Aerial operations treated/protected more than 200,000 ha from November 28, 2010 to the 1<sup>st</sup> dekad of June. Ground control continued to prevent residual and escapee populations from becoming a reservoir for the next breeding season. FAO cautions that hundreds of thousands of ha may be needing treatment during the 2011-2012 campaign (FAO).

**Forecast:** The 2011/12 campaign will likely commence at the onset of the spring rains sometime in October/November and when eggs begin hatching and hoppers start forming. If so, considerable amount of recourses may be required to launch a campaign (FAO puts the figure at USD7.6 million) FAO/CNA).

*Note: The UN/FAO and the Malagasy Center for Locust Control (CNA) are spearheading the current locust control campaign in the country. The United States Agency for International through its Office of Foreign Disaster Assistance (OFDA) responded in time and favorably to the appeal issued by FAO in support of the locust emergency campaign operations spearheaded by the FAO-CNA. Other donors have pledged and/or made contributions and it is anticipated that this will likely continue. End note.*

**Moroccan (DMA), Italian (CIT) and Migratory (LMI)** locusts in Central Asia and the Caucasus (CAC): The DMA situation continued in some of the counties in the region, but declined in others during June. The pest was treated on more than 920,000 ha through June 6<sup>th</sup> in the region as a whole. CIT and MLI are expected to continue appearing and breeding in some of the CAC countries during the forecast period.

**Armyworm (AAW):** AAW infestations continued in June in eastern Ethiopia where control operations were intensified. 3,400 l of Malathion 96% ULV were transferred from the DLCO-EA base in Dire Dawa to the MoA regional offices in eastern and western Hararghe zones. AAW infestations were also reported in Amhara and Tigray regions in northern Ethiopia, but remained calm in Kenya, Tanzania and other IRLCO-CSA member-countries (DLCO-EA, IRLCO-CSA).

**Forecast:** More infestations are likely in the northern and the central parts of Ethiopia in the coming weeks. The pest will likely appear in southern, central

and northern highlands in Eritrea in the coming months. Community-based monitoring, forecasting and reporting should be activated where present. Active monitoring, reporting and preventive interventions should be intensified to the extent possible.

**Quelea (QQU):** QQU outbreaks were reported in Kenya and Tanzania. Roosts and colonies were controlled in Morogoro and Mbeya Regions of Tanzania. Roosts were also seen in Ghaza in Mozambique and control operations were launched in Botswana during this month (DLCO-EA, IRLCO-CSA).

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

#### **Progress in SGR Frontline Countries:**

SGR frontline countries (FCs) in Sahel West Africa, namely **Chad, Mali, Mauritania** and **Niger** have established autonomous national locust control units (CNLA) responsible for 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 help train staff to prevent and respond to DL outbreaks and avoid the threats they pose to food security and livelihoods of vulnerable communities.

*CNLAs' ability to avert, respond to and mitigate devastating DL outbreaks and*

*invasions need to be encouraged and supported.*

### OFDA ETOP Activities

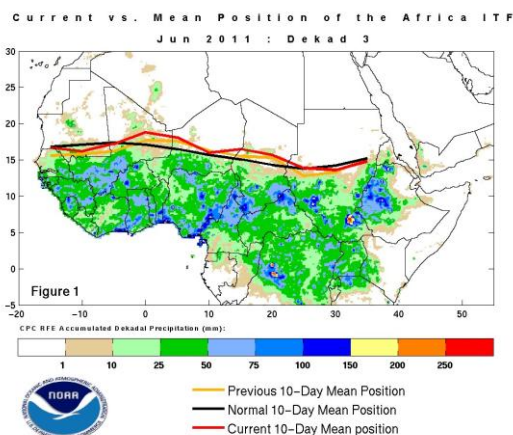
- OFDA/TAG continues its initiatives in pesticide risk reduction through stewardship network (PRRSN) to ensure safety of vulnerable people as well as protect their assets and the environment against pesticide pollution. OFDA/TAG successfully launched two sub-regional PRRSNs in Eastern Africa and the Horn. Discussions that began several months ago to launch similar initiatives in North Africa and the Middle East were halted by the ongoing situation in the regions. A dialogue on similar initiatives in other regions is underway.
- OFDA continues its support for capacity strengthening to mitigate, prevent and respond to and reduce risks of ETOP emergencies and associated human health threats and environmental pollutions.
- OFDA has provided assistance to the FAO program to strengthen national and regional capacities to help coordinate locust monitoring, reporting, prevention and mitigation efforts to abate the threats they pose to food security and livelihoods of vulnerable communities in Central Asia and the Caucasus (CAC).

**All SITREPs can be accessed on 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/)

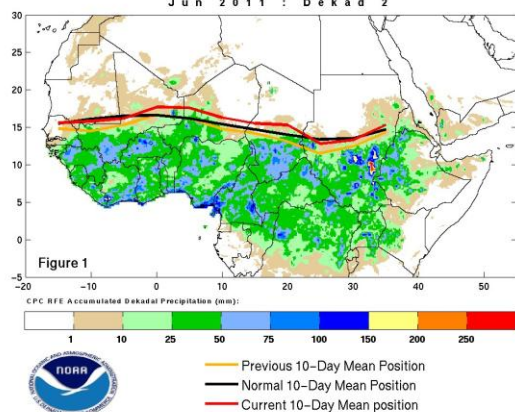
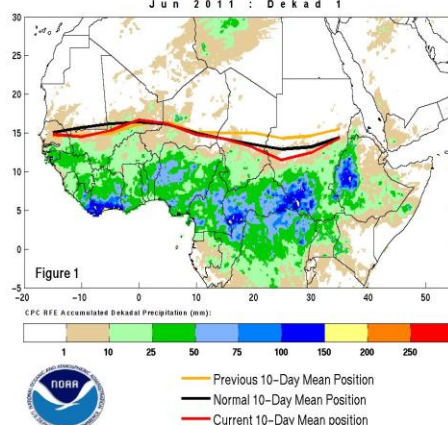
### Weather and ecological conditions

During the 3rd dekad of June, the Inter-Tropical Front (ITF) moved northward across the central portions of West Africa due to the strong thermal low in the Sahel, which strengthened the moist southerly winds across the Gulf of Guinea. However, the dry northerlies over northern and central Sudan continued blocking the migration of the ITF across its eastern portion.



The mean western portion of the ITF was estimated at about 17.3N, 1 degree above the mean climatological position, but in the east it was approximated at 14.5N, ahead of the climatology mean by only 0.1 degrees (see map, NOAA, 6/2011). Seasonal rains commenced in some of the summer breeding areas from Mauritania to central Chad (FAO-DLIS, NOAA).

During the 2<sup>nd</sup> dekad of June, the Front shifted north of the climatology mean over its western and eastern segments compared to its position for this time of year. The mean western portion of the ITF was around 16.7N, ½ degree ahead of the climatology mean. This was associated with an increase in moist, southerly winds over central parts of West Africa. The eastern portion of the ITF was around 14.2N, 0.3 degrees north of the climatology mean.

Current vs. Mean Position of the Africa ITF  
Jun 2011 : Dekad 2Current vs. Mean Position of the Africa ITF  
Jun 2011 : Dekad 1

The mean eastern position of the ITF was slightly north of the climatology mean, but drier air over the Darfur region of Sudan suppressed the ITF slightly south of the climatology mean over western Sudan (see map, NOAA).

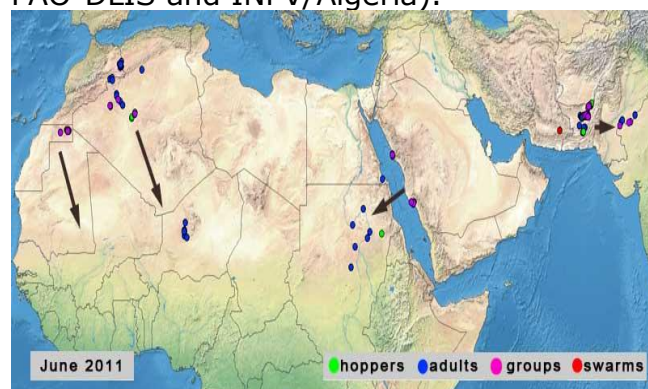
During the 1<sup>st</sup> dekad of the month, the ITF experienced a significant southward shift over its eastern segment with the mean western portion located around 15.5N, 0.4 degree behind the climatology mean, especially in the far western portions of the Sahel due to an increase in northerly winds. The eastern portion of the ITF was around 12.8N, 2 degrees south of the previous dekad position and 0.7 degree behind the climatology mean position. The large, southerly retreat of the ITF was associated with a change from strong, moist southerly winds during the end of May to strong, dry northerlies during the first dekad of June (see map, NOAA, 6/2011).

Monsoon rains reached Rajasthan, India by the end of June. The weather condition in NSE outbreak areas remained generally dry, but isolated showers were recorded in the Buzi-Gorongosa plains in Mozambique and temperatures were relatively low in most of the outbreak areas during June (IRLCO-CSA).

**Note:** Changes in the weather patterns 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. **End note.**

**Detailed accounts of ETOP situation, activities and ecological conditions are presented below.**

**SGR - Western Outbreak Region:** The SGR infestation declined in the Western outbreak region and ground operations treated locally bred populations in 65 ha in central Sahara in Algeria and in 153 ha in southwestern Morocco. Infestations declined in northwest Mauritania due to dry conditions. No locusts were reported in other countries in Sahel West Africa during this period (CNLA/Mauritania, CNLAA/Morocco, FAO-DLIS and INPV/Algeria).



Desert Locust shift from spring to summer breeding areas, FAO-DLIS, 7/2011)



Late instar gregarious hoppers in d'Oued Saoura, W. Béchar, Algeria (INPV, May, 2011, INPV/Algeria)

**Forecast:** Good rains started falling in the summer breeding areas in southern and central Mauritania and northern Mali and Niger as well as western Chad. Tamesna, in Niger received the heaviest rainfall. Annual vegetation has started greening in areas of recent rainfall. Scattered adults will begin appearing in the summer breeding areas in the Sahel west Africa and breed and increase locust numbers during the forecast period (CNLA/ Mauritania, CNLAA/Morocco, FAO-DLIS and INPV/Algeria).

#### **SGR - Central Outbreak Region:**

Ground control operations were concluded early June on the Red Sea coast in Saudi Arabia where a mere 900 ha were treated where during this period. Infestations declined on the Red Sea coast in Egypt and no locusts were reported moving from the Red Sea coasts of Saudi Arabia into the interior of the country and Yemen. Exceptionally dry conditions prevailed in Somalia, Djibouti, eastern and south eastern Ethiopia and northern Kenya (DLCO-EA, FAO-DLIS, PPD/Sudan).

**Forecast:** Control operations on the central coast of Saudi Arabia significantly reduced locusts numbers and the chance of adults moving into the interior of the

country and Yemen are minimized. There is a slight chance of adult groups crossing the Red Sea and reaching summer breeding areas in northern Sudan. Scattered adults that were reported in northern Sudan will likely begin breeding and a similar situation may occur in the western lowlands in Eritrea during the forecast period (DLCO-EA, FAO-DLIS, PPD/Sudan).

**SGR - Eastern Outbreak Region:** Ground control continued against scattered adults and hoppers in northern Baluchistan, northern Pakistan where more than 2,900 ha were treated during this month. A small swarm measuring 3 ha was treated in southeastern Iran and scattered adults were reported in Cholistan and Rajasthan along the Indo-Pakistan borders. Small groups of hoppers were also detected in Rajasthan indicating that breeding had commenced there (DPPQS/India, FAO-DLIS).

**Forecast:** Locust numbers will increase slightly along the Indo-Pakistan borders as more adults begin appearing and start breeding and forming small groups during the forecast period. Vigilance should be maintained and necessary actions taken to avoid further developments (DPPQS/India, FAO-DLIS).

**Red (Nomadic) Locust (NSE):** Survey and control operations that began in April 2011 in Ikuu-Katavi plains, North Rukwa plains and Wembere plains in Tanzania were concluded. A total of 14,276 ha were surveyed and 4,060 ha were treated in Wembere plains with 2,000 l of Fenitrothion 96% ULV. Red Locust populations persisted in the Buzi-Gorongosa and Dimba plains of Mozambique, the Lake Chilwa/ Lake Chiuta plains which are shared by Malawi and Mozambique, and in the Kafue Flats in Zambia. (IRLCO-CSA).

**Forecast:** Grass burning that commenced in June in most of the outbreak areas will concentrate Red Locust populations on patches of unburned vegetation. Some of the swarms

could migrate to locations farther a field. IRLCO-CSA will carry out survey and, where necessary, control operations in the outbreak areas in collaboration with the MoA in the affected countries (IRLCO-CSA).

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

The LMC campaign that commenced in October 2010 was concluded by mid-June. Aerial operations treated/protected more than 200,000 ha from November 28, 2010 to the 1<sup>st</sup> dekad of June. Ground control continued to prevent residual and escapee populations from becoming a reservoir for the next breeding season and to protect crops and pasture. FAO cautioned that hundreds of thousands of ha will be needing treatments during the 2011-2012 campaign (FAO).

**Forecast:** The next LMC campaign will likely commence at the onset of the spring rains in October/November when eggs begin hatching and hoppers start forming. If so, according to FAO-CNA, considerable amount of recourses will be required, nearly half of what was originally estimated for the campaign that was concluded just two weeks ago (FAO/CNA).

*Note: The UN/FAO and the Malagasy Center for Locust Control (CNA) are spearheading the current locust control campaign in the country. The United States Agency for International through its Office of Foreign Disaster Assistance (OFDA) responded in time and favorably to the appeal issued by FAO in support of the locust emergency campaign operations spearheaded by the FAO-CNA. Other donors have pledged and/or made contributions and it is anticipated that this will likely continue. End note.*

**Moroccan (DMA), Italian (CIT) and Migratory (LMI)** in Central Asia and the Caucasus (CAC): The DMA situation continued some of the counties in the region, but declined in others during June. The pest was treated on more than 920,000 ha through June 6<sup>th</sup> in the region as a whole.



(Locust prone CAC countries, FAO)

Natural vegetation was already dry in southern Central Asian countries, and hoppers and adults were concentrating in vegetation that remained green. DMA and CIT activities will likely continue in the coming months in different places. CIT and LMI should begin appearing in several places during the forecast period (AELGA).

**Australian Plague Locust (APL):** No new information was obtained at the time this report was compiled, but most of the eggs that were laid during April will remain dormant until hatching begins sometime in October (AELGA, APLC).



(Australian plague locust, source: APLC)

**Timor and South Pacific:** No update was received in June in Timor, but it is likely that migratory locusts and grasshopper species may have continued posing a threat to crops and pasture.

**African Armyworm (AAW):** AAW infestations continued in Harari, Somali, Oromiya (eastern & western Hararghe, Bale zones) and Dire Dawa Administrative Council in eastern Ethiopia in June. Control operations were intensified and 3,400 l of Malathion 96% ULV were transferred from the DLCO-EA's base in Dire Dawa to the MoA offices in eastern and western Hararghe zones of the Oromiya.

AAW were also reported in Amhara and Tigray regions in northern Ethiopia, but the situation remained calm in Kenya, Tanzania and other IRLCO-CSA member-countries during this period (DLCO-EA, IRLCO-CSA).

**Forecast:** It is highly likely that AAW infestations will continue in northern and central Ethiopia and also commence in southern, central and northern highlands in Eritrea in the coming weeks. Community-based monitoring, forecasting and reporting should be activated where present. Active monitoring, timely reporting and preventive interventions should be maintained.

**Quelea (QQU):** QQU outbreaks were reported in Narok, Naivasha, Suba, Siaya and Tharaka districts in Kenya. Six roosts were controlled in Suba and Narok using Fenthion 60% (Queletox). QQU roosts and colonies occupying a total of 379.5 ha were also controlled in Morogoro and Mbeya Regions of Tanzania with Fenthion 60%. Quelea roosts were located in Ghaza province of Mozambique and outbreaks were reported in Central, Francistown, Southern, Kwaneng Kgatleng, and Chobe districts in Botswana where 61 colonies were controlled using Cynaphos 52% ULV

and by other means (DLCO-EA, IRLCO-CSA).

**Forecast:** QQU birds will likely continue being a problem to small grain cereal growers in the Rift Valley, Nyanza and Eastern Provinces of Kenya, Morogoro and Mbeya regions of Tanzania, Chokwe Rice Irrigation Scheme in Ghaza province of Mozambique, in Zimbabwe where winter wheat is grown and in Botswana where sorghum and millet crops are at a susceptible stage.



(A QQU roost, a file photo; free encyclopedia)

**Facts:** QQU birds can travel ~100 km/day looking for food. An adult QQU 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 rodent outbreak or infestation was reported during this month, but the pest remains a constant threat to both pre- and post-harvest crops and produces in many countries around the globe.

*Several raptor birds, such as barn owl, Tyto Alba and other animals are known nature's biological control agents that contribute to maintaining the balance between outbreaks and a period of lull.*

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, ELOs and others are encouraged to continue sharing information with partners and other stakeholders as often as possible.

### Inventories of Acridid Pesticide Stocks

A cumulative total of some 15,000 l of pesticides were used in June, mainly in Pakistan, Ethiopia (for AAW), Kenya, Tanzania, Saudi Arabia, Morocco, Algeria and Iran.

Mindful of the fact that pesticides become obsolete once past their shelf-lives, ETOP-prone countries, particularly those with large stocks, but are less likely to use them within a reasonable time, are encouraged to test their inventories regularly and determine whether they should use, retain, share or discard them immediately. All options should be explored to avoid severe human health impacts as well as huge environmental and financial burdens associated with handling and disposing of large stocks of obsolete pesticides.

A judiciously executed triangulation of stocks from countries with large inventory to where the need exists is a double-edged alternative that is worth considering.

**Note:** The core message of **pesticide stewardship [networking]** is to strengthen the national and regional pesticide delivery systems by linking partners at different levels and thereby reduce pesticide related health risks, avoid environmental pollution and improve food security as well as ultimately contribute to the national economy. **End note.**

### Estimated [acridid] pesticide inventories as of April, 2011

Country	Quantities in '000l/kg <sup>\$</sup>
Algeria	1,800~
Chad	108.09~
Eritrea	43.90~
Egypt	Data not available
Ethiopia	15.78
Libya	Data not available
Madagascar	1.6c + 0.00g + 1.10b
Mali	209d~
Mauritania	435.3~
Morocco	4,100~
Niger	28.24+
Senegal	519~
Saudi Arabia	Date not available
Sudan	860.00"
Tunisia	167.60~
Yemen	33.00 + .527 kg GM

These quantities include ULV, EC and dust formulations  
 ~ data not necessarily current  
 l = 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 2003-5 DL campaign was tested for quality and found to be usable through 2012 This includes EC, ULV and Dust for all crop protection uses  
 GM = GreenMuscle  
 b = biopesticide (Madagascar)  
 c = conventional pesticides (Madagascar)  
 g = insect growth regulator (Madagascar)

### LIST OF ACRONYMS

AAW	African armyworm ( <i>Spodoptera expempta</i> - SEX)
AELGA	Assistance for Emergency Locust Grasshopper Abatement
AME	<i>Anacridium melanorhodon</i>
APL	Australian Plague Locust

APLC	<i>Australian Plague Locust Commission</i>	IRLCO-CSA	<i>International Red Locust Control Organization for Central and Southern Africa</i>
CAC	<i>Central Asia and the Caucasus</i>	ITCZ	<i>Inter-Tropical Convergence Zone</i>
CERF	<i>Central Emergency Response Fund</i>	ITF	<i>Inter-Tropical Convergence Front = ITCZ)</i>
CIT	<i>Calliptamus italicus</i>	FAO-DLIS	<i>Food and Agriculture Organizations' Desert Locust Information Service</i>
CLCPRO	<i>Commission de Lutte Contre le Criquet Pèlerin dans la Région Occidentale (Commission for the Desert Locust Control in the Western Region)</i>	Kg	<i>Kilogram (~2.2 pound)</i>
CNLA/CNLAA	<i>Centre National de Lutte Antiacridienne (National Locust Control Center)</i>	L	<i>Liter (1.057 quarts or 0.264 gallon or 33.814 US fluid ounces)</i>
CRC	<i>Commission for Controlling Desert Locust in the Central Region</i>	LMC	<i>Locusta migratoriacapito</i>
CTE	<i>Chortoicetes terminifera</i>	LMM	<i>Locusta migratoria migratorioides (African Migratory Locust)</i>
DDLC	<i>Department of Desert Locust Control</i>	LPA	<i>Locustana pardalina</i>
DL	<i>Desert Locust</i>	MoAFSC	<i>Ministry of Agriculture, Food Security and Cooperatives</i>
DLCO-EA	<i>Desert Locust Control Organization for Eastern Africa</i>	MoARD	<i>Ministry of Agriculture and Rural Development</i>
DMA	<i>Dociostaurus maroccanus</i>	NOAA	<i>National Oceanic and Aeronautic Administration</i>
DPPQS	<i>Department of Plant Protection and Quarantine Services</i>	NSE	<i>Nomadacris septemfasciata</i>
DPV	<i>Département Protection des Végétaux (Department of Plant Protection)</i>	OFDA	<i>Office of U.S. Foreign Disaster Assistance</i>
ELO	<i>EMPRES Liaison Officers</i>	PHD/S	<i>Plant Health Directorate/ Services</i>
EMPRES	<i>Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases</i>	PPD	<i>Plant Protection Department</i>
ETOP	<i>Emergency Transboundary Outbreak Pest</i>	PPSD	<i>Plant Protection Services Division/Department</i>
GM	<i>Green Muscle (a fungal-based biopesticide)</i>	PRRSN	<i>Pesticide Risk Reduction through Stewardship Network</i>
ha	<i>hectare (= 10,000 sq. meters, about 2.471 acres)</i>	QQU	<i>Quelea quelea</i>
IRIN	<i>Integrated Regional Information Networks</i>	SGR	<i>Schistoseca gregaria</i>
		SWAC	<i>South West Asia DL Commission</i>
		TAG	<i>Technical Assistance Group</i>
		USAID	<i>Unites States Agency for International Development</i>
		UN	<i>the United Nations</i>
		ZEL	<i>Zonocerus elegans, elegant grasshopper</i>
			<a href="#">To learn more about our activities and the programs we support, please, visit our website at:</a>

[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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