Emergency Transboundary Outbreak Pest (ETOP) Situation Report for May with a Forecast till mid-July, 2010

Summary

The **Desert Locust** (DL[1]): Breeding was reported in May in northwest Africa and ground operations controlled hoppers and fledglings in more than 1,880 hectares (ha) in **Morocco**, **Algeria** and **Libya** during this time. Hoppers were also controlled in some 2,700 ha in **Saudi Arabia** during this period. Small-scale breeding was reported in **Oman**. Other outbreak and invasion countries remained calm during this period (CNLA/Niger, DDLC/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia, PPD/Sudan).

Forecast: Ecological conditions will continue deteriorating on the costal areas in **Saudi Arabia** and northern Africa and force adult locusts to move to the interior of **Sudan** and northern Sahel breed on a small-scale at the onset of the summer rains. Low numbers of adults will likely appear in southern **Mauritania**, northern **Mali** and **Nige**r and small-scale breeding may occur at the onset of the summer rains. In **Libya**, low numbers of solitary adults may persist in some areas in the southwest of the country. Small-scale breeding will also likely begin along the **Indo-Pakistan** borders but other areas will likely remain calm during the forecast period (DDLC/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia, PPD/Sudan).

- **Other ETOPs**

Red Locust RL): RL swarms and concentrations from the previous month persisted through May in the outbreak areas in **Tanzania**. Isolated low density populations were detected during aerial surveys carried out in the outbreak areas in **Mozambique**. At the time this report was compiled surveys were in progress to ascertain the locust situation in the outbreak areas in **Zambia**. The situation remained relatively calm along the borders of **Malawi** and **Mozambique** during this period (IRLCO-CSA).

Forecast: As the seasonal grass burning begins in June, adults will concentrate and form swarms in patches of green vegetation during the forecast period. Swarms will then migrate to other areas. Plans are underway to launch control operations in the outbreak areas in June (IRLCO-CSA).

IRLCO-CSA has issued an appeal to development partners for assistance for emergency control operations in the outbreak areas.

Moroccan (DMA) and **Italian (CIT) locusts:** DMA started hatching in **Tajikistan**, **Turkmenistan** and **Uzbekistan** in Eastern Europe, Central Asia and the Caucasus (EECAC) as of mid-March. By May 7th, hoppers and bands were treated on more than 373,000 ha in **Kazakhstan**, **Tajikistan** and **Uzbekistan** alone. More than 14,000 ha were reported infested with DMA in April in **Georgia** and a similar

[1] *Definitions of all acronyms can be found on the last pages of this report.*

situation may exist in **Afghanistan**. DMA will likely continue developing further during the forecast period.

Armyworm (AW): AW infestations were detected in 363,000 ha in crop fields and grazing land in southern and eastern **Ethiopia** beginning mid-April. More than 85,700 ha have been controlled since. No information was received from **Eritrea** (where the pest may be present), **Kenya**, **Tanzania** or **Uganda** at the time this report was compiled (AELGA, DLCO-EA).

Forecast: AW infestations will likely continue threatening crops and pasture in **Ethiopia** and perhaps in **Eritrea** during the forecast period. There is a slight chance for the pest to appear in northern **Kenya** and **Tanzania**. Trap operators and forecasters, including community-based forecasters are encouraged to remain vigilant and share information with partners as rapidly and regularly as possible.

Quelea: *Quelea* colonies and roosts were controlled on 870 ha in **Tanzania** in May. The pest was reported on Bulrush, millets, rice and other crops. Four colonies and non-breeding populations were detected in several places in **Kenya** during surveys carried out by DLCO-EA and MoA/**Kenya**. A DLCO aircraft treated *Quelea colonies and roosts on 990 ha* in **Mozambique** *from 4 to 11 May.* No reports were received from other countries during this period (DLCO-EA).

Forecast: Quelea will likely remain a threat to small grain cereals in several provinces in **Kenya** and rice growing regions of **Tanzania**. The bird will also threaten 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 Frontline Countries:

Frontline countries (FCs) in Sahel West Africa - **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, host-governments, neighboring countries and others enabled the FCs to equip CNLAs with tools, materials and infrastructure as well as train staff and technicians to prevent DL outbreaks and invasions and respond to the threats they pose. The overhaul of the CNLAs is considered a significant improvement over the condition they were 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. To date, OFDA/TAG has 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 be approached in **Eastern Europe**, **Central Asia**, the **Caucuses** and other regions to introduce similar initiatives in due course.

- 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 EECAC 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.

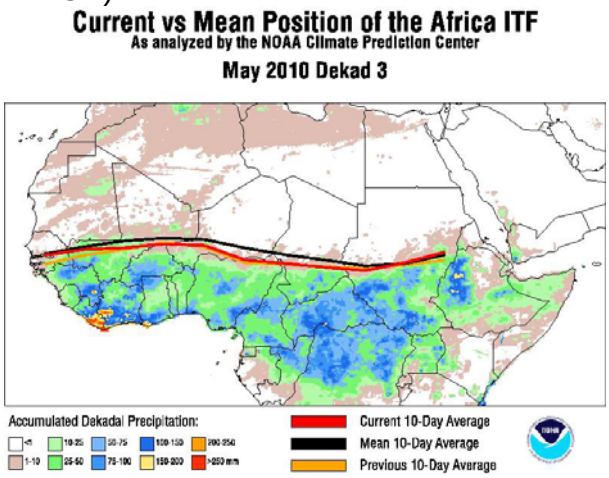
Detailed accounts of ETOP situation and activities as well as ecological and weather data across ETOP regions are presented below.

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

http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/

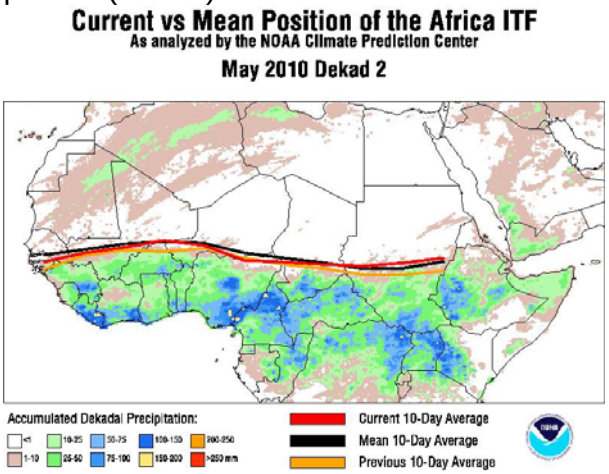
Weather and ecological conditions

During 21-31 May, the Inter-Tropical Front (ITF) was located around 14.3N in the western portion, slightly higher than the position in the previous dakad. Its northern migration over parts of northern **Nigeria** and **Chad** resulted in showers and moisture increase, improving ecological conditions for locusts to develop. The eastern portion of the ITF was north of its previous position, but closer to its long-term mean position. In the extreme eastern portion, the Front moved further north resulting in increased rainfall over parts of eastern **Sudan** and southern **Ethiopia** where breeding conditions will likely improve (NOAA, AELGA).

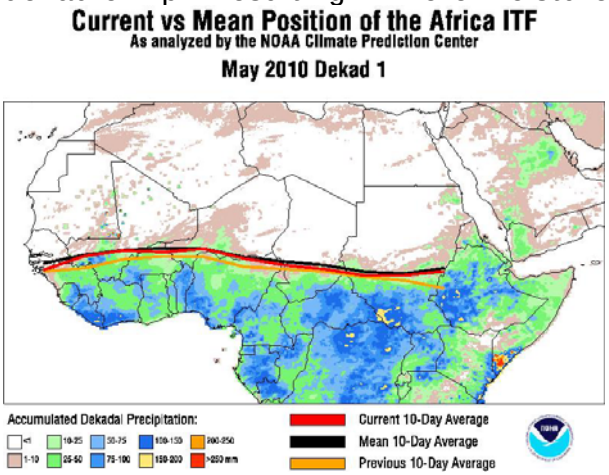


In the second dekad of May, the Front showed progressive migration to the north and by mid-month it was near 14.1N over

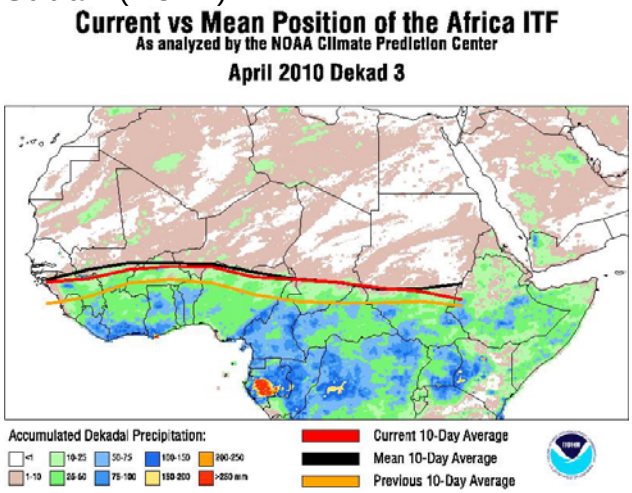
parts of **Mali** and **Burkina Faso** and **Nigeria**. Its eastern portion was slightly ahead of climatology with increased winds and moisture from the south during this period (NOAA).



The Front continued its northern migration during the first dekad of May. Its western position was closer to but a bit lower than the climatological mean position of 13.8N whereas the eastern portion moved further north particularly over **Sudan** and **Ethiopia** from its position during the third dekad of April resulting in more moisture.



Its mean western portion during the last dekad of April was at around 12.6N which remained southerly than the climatological mean position of 13.3N although it became closest to the mean position since the start of April. The eastern portion of the Front experienced a northward advancement during the last dekad of April and remained near normal position over **Chad** and **Sudan** (NOAA).



Dry spell and hot temperatures prevailed in the Scheduled Desert Area, in Rajasthan, North Gujarat, Saurashtra and Kutch in **India** in May (DPPQS/India). Ecological conditions continued improving in EECAC as temperatures started becoming mild and vegetation began greening (FAO-AGPM). Apart from isolated showers recorded in the Buzi-Gorongosa plains in **Mozambique** and Wembere plains in **Tanzania**, the RL outbreak areas remained generally dry and the temperatures were relatively low during this period.

***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**.*

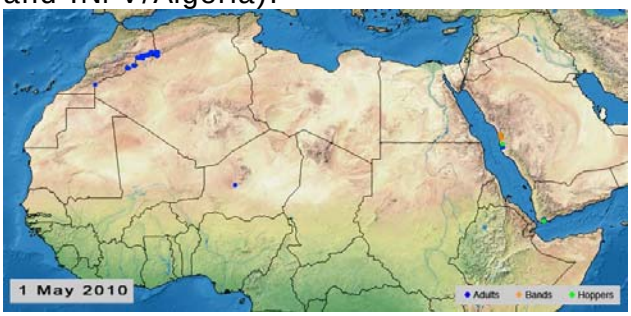
Detailed accounts of ETOP situations and activities

DL - Western Outbreak Region

Ground operations controlled solitary and transient hoppers and adults on 1,495 ha in **Morocco** south of the Atlas Mountains where small-scale breeding occurred in March and April. Hoppers were also controlled during this period on 348 ha and 40 ha in central

Algeria and southwest **Libya**, respectively (DDLC/Libya, FAO-DLIS, INPV/Algeria).

Forecast: Some adult locusts will likely begin appearing in southern **Mauritania**, northern **Mali** and **Nige**r and small-scale breeding may commence with the onset of the summer rains. In **Libya**, low numbers of solitary adults may persist in some areas in the southwest of the country near Ghat, Ghadames and Sabha. However, significant developments are not likely during the forecast period (DDLC/Libya, FAO-DLIS, and INPV/Algeria).



(Groups of hopper bands and immature adults were controlled on the Red Sea coast of Saudi Arabia, FAO-DLIS, 5/10)

DL - Central Outbreak Region

Ground operations controlled hopper bands in 2,695 ha on the coastal areas in **Saudi Arabia**. Undetected breeding occurred in April in northeastern **Oman** where hopper groups and concentrations formed in May in areas of green vegetation. Scattered mature solitary adults were reported in Tokar Delta in **Sudan**, but no locusts were detected during surveys carried out in the northern costal areas of the country. An unconfirmed report indicated the presence of adult locusts near Aysha (1045N4234E) in eastern **Ethiopia** and on the borders with **Djibouti** and **northern Somalia**. No locusts were reported in other countries in the region during this period (DLCO-EA, FAO-DLIS, PPD/Ethiopia, PPD/Sudan).
Forecast: Ecological conditions will continue deteriorating on the costal areas in **Saudi Arabia** and will likely force adult locusts to move to the summer breeding areas in the interior of **Sudan**. Small-scale breeding may commence in north Darfur and Kordofan as well as the White Nile States in **Sudan** at the onset of the summer rains. The western lowlands in **Eritrea** may experience a similar situation during this period. Low numbers of solitary adults will likely appear in the northern plateau in **Somalia** and eastern **Ethiopia** where small-scale breeding may occur in areas of recent rainfall during the forecast period (DLCO-EA, FAO-DLIS, PPD/Ethiopia, PPD/Sudan).

DL- Eastern Outbreak Region

No locusts were reported in May in the spring breeding areas along the western **Pakistan** and southeastern **Iran** borders. The Scheduled Desert Area of Rajasthan and Gujarat States in I**ndia** remained calm during this period (DPPQS/India, FAO-DLIS).

Forecast: Solitary adults may begin appearing in the summer breeding areas along the **Indo-Pakistan** borders, but significant developments are not likely during the forecast period (DPPQS/India, FAO-DLIS).

Red Locust (RL): **RL** swarms and concentrations that were reported in Ikuu-Katavi, North Rukwa and Wembere plains as well as in Malagarasi Basin in **Tanzania** in April persisted in May. Isolated low density populations were detected during aerial surveys (using a helicopter) carried out on close to 97,000 ha in Buzi-Gorongoza and Dimba plains in **Mozambique** where more than 4,800 ha were reported infested. At the time this report was compiled surveys were in progress in the Kafue Flats and the Lukanga swamps in **Zambia** to ascertain the locust situation. The situation remained relatively calm in the Lake Chilwa/Lake Chiuta plains along the borders of **Malawi** and **Mozambique** during this period.

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

Forecast: As the seasonal grass burning commences in June, RL will concentrate in patches of green vegetation where swarms will likely develop during the forecast period. Swarms will then migrate to other areas where control operations may not be practical. IRLCO-CSA and MoAs in affected countries are planning to launch survey (~ 330,000 ha) and control operations in the outbreak areas to avert swarm developments and curtail further migrations. Some 3,00o ha in Ikuu-Katavi and Malagarasi Basin will be sprayed with bio-pesticides due to ecological sensitivity of the target areas (IRLCO-CSA).

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 threatening crops and pasture in several places.

Moroccan (*Dociostaurus maroccanus - DMA*)**, Italian Locusts** (*Calliptamus italicus* – CIT) in the **EECAC**

A late received report indicated that the DMA started hatching in mid-March in **Kazakhstan**, **Tajikistan**, **Turkmenistan** and **Uzbekistan** and by the first week of May, hoppers and bands were treated on 52,800 ha in **Kazakhstan**, in 38,000 in **Tajikistan** and 277,000 in **Uzbekistan**. Survey and control operations are in progress here and elsewhere in the region.

More than 14,000 ha were reported infested with DMA in April in the south-eastern part of **Georgia** near the border with **Azerbaijan** (although an update was not received at the time this report was compiled a similar situation may have occurred in northern **Afghanistan)**. The **Italian locust** (a pest that is considered more serious) usually appears in May and June in **Georgia** and MoA staff are advised to remain vigilant. Given the scale of the current infestation and the anticipated need for resources to abate the **Italian** locust, **Georgia** has issued an appeal for assistance targeting the UN-FAO and others.

(DMA, source: naturamediterraneo.com)

Australian Plague Locust (APL)

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 May, but it is likely that grasshoppers and locusts continue to be active.

Armyworm: Widespread armyworm infestations were reported in the southern, southeastern and eastern parts of **Ethiopia**. The pest was first detected in mid-April and has since infested close to 118,000 ha of cropland and 245,300 ha of grazing land. Control operations treated close to 39,800 ha of cropland and 35,200 ha of grazing land with 35,144 liters of insecticide and an additional 10,707 ha of grazing land was controlled using cultural methods. No updates were received on **Tanzania**, **Kenya**, **Eritrea** (although the pest may have begun appearing), or **Uganda** at the time this report was compiled.

Forecast: Armyworm infestations will likely continue in **Ethiopia** and **Eritrea** during the forecast period. Trap operators and forecasters, including community forecasters where applicable, must remain vigilant and share information with communities and partners as rapidly as possible.

Quelea: *Quelea* birds were controlled on more than 870 ha in Shinyanga, Singida, Iringa, Dodoma Mbeya, Mwanza, and Musoma regions in **Tanzania** in May. The pest was reported attacking Bulrush, millets, rice and other crops. Joint control operations by DLCO-EA and the MoA were in progress at the time this report was compiled. ***Quelea*** colonies and non-breeding populations were also detected in several locations in Magadi, Tsavo, Ambosseli, National Parks, Galana and Tana Delta during joint aerial surveys carried out by DLCO-EA and MoA/**Kenya**.

(Quelled roost, a file photo from the free encyclopedia)

Control was carried out against eight roosts consisting 10s of millions of birds on more than 990 ha in Chokwe Irrigation Scheme (more than 7,300 ha are under paddy rice) in **Mozambique**. Control operations were launched by IRLCO-CSA and MoA/ **Mozambique** using a DLCO-EA spray aircraft. No outbreaks were reported in other countries (DLCO-CA, IRLCO-CSA).

Facts: ***Quelled*** *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.

Pesticide Stocks

Algeria, **Libya**, **Morocco** and **Saudi Arabia** conducted control operations against hoppers, fledglings and adults in May using a total of 4,588 litres of pesticides (no current baseline data is available for all of these countries). **Ethiopia** reported some 2,600 litres less than the previous month. This is possibly due to the on-going armyworm operations in the country. These countries aside, pesticide inventories remained unchanged for all other countries during this month.

It is highly likely that some of the pesticides listed in the below box may have expired or will soon expire. Mindful of this, ETOP-prone countries, particularly those with large stocks, are encouraged to regularly test their stocks and determine whether they should be retained or should be used or immediate discarded. 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
Algeria	1,800,000~
Chad	108,085~
Eritrea	44,800~
Ethiopia	9,600
Libya	No baseline data
Mali	209,000%~
Mauritania	480,000~@
Morocco	4,105,300~
Niger	28,240+
Senegal	519,000~
Saudi Arabia	No baseline data
Sudan	701872[m]
Tunisia	167,600~
Yemen	Data not available

~ data not necessarily current
% Mali donated 21,000 l for RL in Malawi, ozambique and Tanzania late last year and FAO facilitated the triangulation
+ quantity reported in Agadez
@ left-over stocks of Chlopyrifos from the 003-5 DL campaign was tested for quality and found to be usable through 2012
[m] This quantity includes EC, ULV and Dust rmulations available for all crop protection uses, including ETOPs

List of Acronyms

AELGA	*Assistance for Emergency Locust Grasshopper Abatement*
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 Pélerin dans la Région Occidentale (Commission for the Desert Locust Control in the Western Region)*
CNLA/CNLAA	*Centre National de Lutte Antiacridienne (National Locust Control Center)*
CRC	*Commission for Controlling Desert Locust in the Central Region*
DDLC	*Department of Desert Locust Control*
DL	*Desert Locust*
DLCO-EA	*Desert Locust Control Organization for Eastern Africa*
DMA	*Dociostaurus maroccanus*

DPPQS	*Department of Plant Protection and Quarantine Services*
DPV	*Département Protection des Végétaux (Department of Plant Protection)*
ELO	*EMPRES Liaison Officers*
EMPRES	*Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases*
ETOP	*Emergency Transboundary Outbreak Pest*
ha	*hectare (= 10,000 sq. meters)*
IRIN	*Integrated Regional Information Networks*
IRLCO-CSA	*International Red Locust Control Organization for Central and Southern Africa*
ITCZ	*Inter-Tropical Convergence Zone*
ITF	*Inter-Tropical Convergence Front = ITCZ)*
FAO-DLIS	*Food and Agriculture Organizations' Desert Locust Information Service*
Kg	*Kilogram (~2.2 pound)*
L	*Liter (1.057 quarts or 0.264 gallon or 33.814 US fluid ounces)*
MoAFSC	*Ministry of Agriculture, Food Security and Cooperatives*
MoARD	*Ministry of Agriculture and Rural Development*
NOAA	*National Oceanic and Aeronautic Administration*
OFDA	*Office of U.S. Foreign Disaster Assistance*
PHD?S	*Plant Health Directorate/ Services*
PPD	*Plant Protection Department*
PPSD	*Plant Protection Services Division/Department*
PRRSN	*Pesticide Risk Reduction through Stewardship Network*
SWAC	*South West Asia DL Commission*
TAG	*Technical Assistance Group*
USAID	*Unites States Agency for International Development*
UN	*the United Nations*

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/

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