

**Emergency Transboundary
Outbreak Pest (ETOP) Situation
Update for September with a
Forecast through
Mid-November, 2014**

SUMMARY

The Desert Locust (SGR¹) situation remained calm in September in summer breeding areas in the western outbreak region. Only a few adults and hoppers were reported in **Mauritania, Niger** and **Chad**. A similar situation may be present in northern **Mali** where surveys were not possible.

Algeria, Libya, Morocco and **Tunisia** remained calm during this month.

In northeastern **Ethiopia** where breeding continued in August, survey and control operations are in progress treated hoppers and mature swarms in 134 ha in September. In **Sudan**, scattered mature adults and hoppers were detected and controlled on some 2,430 ha in northeast during this period. A similar situation was present in summer breeding areas in the western lowlands in **Eritrea**. Mixed instar hoppers were detected northeast of Hodeidah near Al Outay in **Yemen** on 11 September. The situation on the coastal areas

along the Red Sea and Gulf of Aden where unusually early and good rains were reported from July through September were not clear due to lack of surveys. No locusts were reported in the summer breeding areas in **Oman, Saudi Arabia** or other countries in the region during this month.

The SGR situation remained calm in the eastern outbreak region and only few scattered adults were reported along the **Indo-Pakistan** borders.

Forecast: As a result of good rains that fell across west and east Sahel over the past months, breeding will occur in **Mauritania, Mali, Niger, Chad** and elsewhere in the region and increase locust numbers during the forecast period.

In the central outbreak region, small swarms will likely form in northern **Ethiopia** and migrate to the winter breeding areas in eastern part of the country and some may reach northern **Somalia** during the forecast period. Small-scale breeding will continue in western lowlands in **Eritrea**, but significant developments are not expected in the coming month. Swarms will form in northern and central **Sudan** and move to the northeastern part of the country

¹ Definitions of all acronyms can be found at the end of the report.

and some will reach southeastern **Egypt**. Small-scale breeding is likely on the coastal areas in **Yemen** and **Saudi Arabia** where good rains fell during previous months (CDLCM/Yemen, DLCO-EA, FAO-DLIS, LCC/Oman, PPD/Sudan).

Vigilance, active surveillance and monitoring are critical to avoid unexpected surprises during the coming months.

The SGR situation will likely remain calm in the eastern outbreak region along the **Indo-Pakistan** borders and only a few scattered adults will persist during the forecast period.

OTHER ETOPS

Red (Nomadic) Locust (NSE): **NSE** persisted in Ikuu-Katavi plains in **Tanzania** and low to medium density populations infested other outbreak areas in the country and elsewhere in **Mozambique**, **Malawi** and **Zambia** in September (IRLCO-CSA).

Extensive vegetation burning in most of the outbreak areas exposed grounds for egg laying. If left uncontrolled, **NSE** will mate on the foothills of the seasonal rains, develop further and migrate to

areas where they will pose serious threat to crops.

The International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA) solicits resources from its member-states and partners to launch critical survey and control operations in affected countries.

Madagascar Migratory Locust (LMC): Control operations further reduced locust populations in major outbreak and invasion areas. The multi-year locust campaign controlled and/or protected close to **1,212,123 ha (~3 million acres)** as of July 31st since it was launched on September 26, 2013 (DPV-FAO).

The **Malagasy locust situation** will remain calm and breeding will not commence until after the seasonal rains begin sometime in November/December. However, aerial monitoring and need-based treatments will remain in effect as needed and the campaign is calling for more resources for the second phase of the multi-year program (DPV-FAO, OFDA-AELGA).

Moroccan (DMA), Italian (CIT), Asian Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): Locust infestations declined

in CAC counties during August and egg-bed surveys beds continued in September (FAO-ECLO).

The **locust situation** will remain calm in **CAC** until spring (OFDA-AELGA).

Tree locusts (*Anacridum* spp.):

No updates were received in September on tree locusts in Turkana, **Kenya** (OFDA-AELGA).

Tree locusts can cause severe damage to commercial and fodder trees such as acacia species that are known for gum Arabic, and other valuable industrial products.

African Armyworm (AAW): AAW outbreaks were not reported in September (DLCO-EA, IRLCO-CSA).

AAW activities will commence in the southern outbreak areas following the seasonal rains in late October into November. No AAW activities are expected in other outbreak or invasion regions during the forecast period (DLCO-EA, IRLCO-CSA, OFDA-AELGA).

Quelea quelea (QQU): QQU bird outbreaks were reported in several counties/Provinces in **Kenya** and **Zimbabwe** where they were reported attacking rice and wheat crops (IRLCO-CSA, OFDA-AELGA).

QQU birds will likely continue being a problem to small grain cereal growers (rice, wheat, etc.) in **Kenya, Tanzania** as well as **Zimbabwe** during the forecast period (IRLCO-CSA).

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

*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 units responsible for all SGR activities.*

OFDA ETOP Activities and Benefits/Impacts

Contributions from 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 now can conduct regular inventories and make informed decisions to prevent unnecessary accumulations of obsolete stocks,

and thereby avoid costly disposal operations, ensure safety of their citizens and protect their shared environment.

OFDA-sponsored, three year program on scaling up community-based armyworm monitoring, forecasting and early warning (CBAMFEW) which was launched in FY 2013 is progressing well. The program aims at reducing the risk of armyworm threats to food security and livelihoods of rural communities and vulnerable populations.

OFDA Senior Technical Advisor for Pesticides and Pests and AELGA Project Manager recently 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 with minimal or no supervision or direct support from agricultural agents or other field staff.

CBAMFEW is managed by DLCO-EA and implemented in collaboration with partners in Ethiopia, Kenya and Tanzania. The project has successfully conducted several training programs and launched an innovative means of collecting and disseminating AAW information by

local famers. This initiative is being scaled up in Ethiopia. The initiative is being implemented in Kenya and Tanzania. OFDA/TAG intends to work with other partners to expand this innovative technology to other armyworm affected countries.

OFDA continued its support for sustainable pesticide risk reduction initiatives through stewardship network (SPRRSN) to strengthen capacities of host-countries and partners to ensure safety of vulnerable populations and protect their assets and the shared environment against pesticide contamination.

OFDA/TAG has successfully launched two sub-regional SPRRSNs in Eastern Africa and the Horn. The Horn of Africa SPRRSN initiative has created a "model" Association dubbed as Pesticide Stewardship Association-Ethiopia (PSA-E) which is viewed as a model for future initiatives. OFDA-TAG has plans to introduce the SPRRSN initiatives to other parts of Africa, the Middle East, CAC and other regions.

OFDA Senior Technical Advisor for Pesticides and Pests recently visited PSA-N activities in Ethiopia and noted progresses and

constraints among partners and beneficiaries.

OFDA continued its support for capacity strengthening programs through a cooperative agreement with FAO. This DRR program assists 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 aimed to strengthen national and regional capacities for ETOP operations in Central Asia and the Caucasus (CAC) is in progress. The program focuses on improving national and regional capacities and promotes coordinated joint locust monitoring, surveillance, reporting and preventive interventions to minimize ETOP threats to food security and livelihoods.

Note: All ETOP SITREPs, including the current one can be accessed on P and P website:

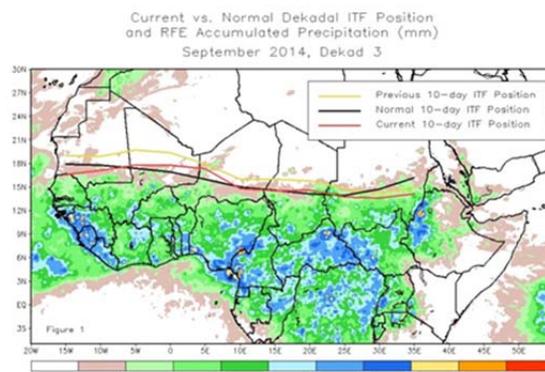
<http://www.usaid.gov/what-we-do/working-crises-and-conflict/responding-times-crisis/how-we-do-it/humanitarian-sectors/agriculture-and-food-security/pest-and-pesticide-monitoring>

Detailed accounts of the weather and ecological conditions, ETOP

situation and forecast for the next six weeks are discussed hereafter.

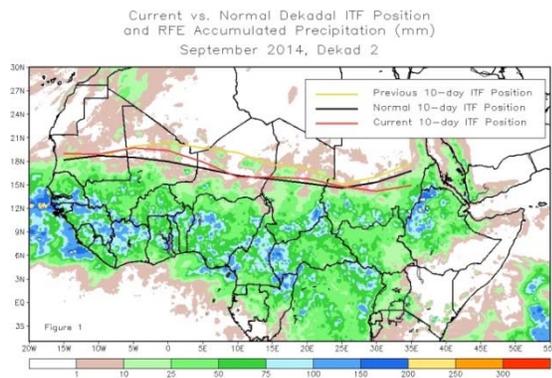
Weather and ecological conditions:

From September 21-30, 2014, the Intertropical Front (ITF) maintained its continued southward migration in the eastern as well as western Africa. The mean western portion of Front (from 10W to 10E) was approximated at 17.0N, which was 1.4 degrees south of the previous dekad's position, but 0.4 N of the mean climatological position, due largely to strong southerlies that caused the Front to hop northward across central **Mali** and parts of **Niger** bringing good rain.



Overall, rainfall was above-average across West Africa during the third dekad of September. The mean eastern portion of the ITF (from 20E to 35E) was approximated at 14.0N, which was 0.9 degrees south of the previous dekad's position and 0.7 degrees south of the mean climatological position. However, average to above-average rainfall was recorded across eastern Africa (see Map below, NOAA, September 2014).

From September 11-20, 2014, the IITF progressed southwards in both eastern and western sections of Africa north of the equator. The mean western portion of the ITF from 10W to 10E was around 18.4N, which was 0.6 degrees north of the mean climatological position, but 1.1 degrees south of the previous dekads position. The Front remained displaced to the north in the western sections of Africa during the last five dekads resulting in continued rainfall farther north across the Sahel than usual.

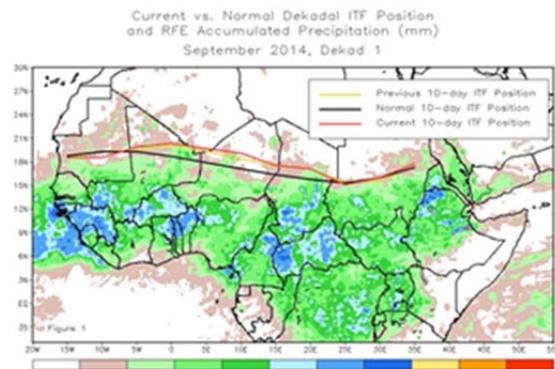


The mean eastern portion of the ITF from 20E to 35E was approximated at 14.9N, which was 0.2 degrees south of the mean climatological position and 1.6 degrees south of the previous dekads position. The ITF across eastern sections rapidly moved southward during the 2nd dekad, although it remains closer to its climatological position. In general, the ITF across both eastern and western sections normally move rapidly southward in September and October according.

During the third week of September, rainfall was above-average over eastern **Senegal**, portions of **Mali**,

southern **Burkina Faso**, local areas in **Chad** and **Sudan** as well as **Ethiopia**. In contrast, **central Chad**, and **South Sudan** Republic received below-average rainfall (NOAA, Sep, 2014).

From September 1-10 ITF moved northward from its position during the previous dekad in both eastern and western sections of Africa. The Front is expected to be retreating southward at this time of the year. The mean western portion of the ITF (10W to 10E) was approximated at 19.5N, which was 0.2 degrees north of the previous dekad's position and 1.0 degree north of the climatological position anomalous of the first dekad of September and brought unseasonal rain in northern **Mali** and **Niger**.



The mean eastern portion of the ITF (from 20E to 35E) was approximated at 16.5N, which is 0.4 degrees north of the mean climatological position and 0.1 degrees north of its position during the third dekad of August. As a result, seasonal rainfall occurred across eastern Africa with localized areas in South Sudan and southern Sudan receiving heavy rains.

In **Yemen**, good rains were reported in September in winter breeding areas in the Red Sea and coastal areas in Gulf of Aden further improving ecological conditions for SRG to breed in vast areas. Light to moderate rain was also reported in a few locations in the summer breeding areas in the interior of Marib, Shabwah and Hadhramout Governorate during this period (DLMCC/Yemen).

In the **NSE** outbreak areas, hot and dry weather prevailed during September. Vegetation burning that continued in all outbreak areas left bare ground and forced locusts to further concentrate and form denser adult groups and swarmlets (IRLCO-CSA).

Warm and dry weather prevailed in the **CAC** regions and no rain was reported during September. Natural vegetation was reported dry during August and continued through September.

A late received report indicated that in **Madagascar**, rainfall further declined and vegetation was dry in most of the outbreak areas by July. Only patches of green vegetation were reported in low laying areas where the soil was wet. The temperatures were in the outbreak and breeding areas this this period (DPV-FAO).

Note: *Changes in the weather pattern contribute to ecological shift in ETOP habitats and can increase the risk of pest outbreaks, resurgence and*

*even emergence of new pests. For instance in **Uzbekistan**, 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.*

*The **Asian migratory locust** which was once known as univoltin (a single generation per year) in the recent past exhibited two generations per year. These phenomena are a serious concern to farmers' rangeland managers and others. Regular monitoring and timely reporting of anomalous manifestations in pest habitats and behavior remain critical.*

End note.

DETAILED ACCOUNTS OF ETOP SITUATION AND FORECASTS FOR THE NEXT SIX WEEKS

SGR - Western Outbreak Region: The SGR situation remained calm in the western outbreak region and only low density mature and immature adults were reported in **Mauritania**, **Niger** and **Chad** in September.



Locust situation in September, 2014, FAO-DLIS

In **Mali**, where ecological conditions are favorable, a few solitary adults and isolated hoppers of all stages were

reported in Tahalt Wadi between Kidal and Aguelhoc. Although the ongoing security situation continues undermining survey and monitoring in the summer breeding areas in northern **Mali**, a similar situation is likely during this time.

Medium to good rains that have been reported across Sahel west, central and east Africa over the past several weeks allowing ecological conditions remain favorable for locusts to survive and reproduce in the central, southern and south-eastern parts of **Mauritania**, northern **Niger** and perhaps adjacent areas in **Mali**. However, only a few low density mature and immature solitary adults were detected during surveys carried out in Trarza in September. The situation remained calm in **Tunisia**, **Morocco**, **Algeria** or **Libya** during this period (CNLA/Chad, CNLA/Mali, CNLA/Mauritania, CNLA/Tunisia, CNLAA/Morocco, CNLA/Niger, FAO-DLIS, NCDLC/Libya)

Forecast: Good rains that were reported across the Sahel in **Mauritania, Mali, Niger, Chad** and elsewhere in the region will maintain favorable conditions for the locusts to breed and increase during the forecast period.

Vigilance and active surveillance as well as regular monitoring remain essential (CNLAA/Morocco, CNLA/Chad, CNLA/Mali, CNLA/Mauritania, FAO-DLIS, OFDA/AELGA, NCDLC/Libya).

SGR (Desert Locust) - Central Outbreak Region:

In **Ethiopia**, hoppers and fledglings were detected on 493 ha in Mile and Chifra districts in the Afar region where ground operations treated hopper bands on more than 133 ha during the 3rd dekad of September (DLCO-EA).



(photo credit: DLCO-EA, 9/2014)

Scattered adults were reported breeding in the interior of **Sudan** and in western **Eritrea** in September. Extensive surveys covered thousands of ha in the summer breeding areas in River Nile, Northern, White Nile, Kassala, Red Sea, and North Kordofan in **Sudan**. Aerial and ground operations treated swarm and hoppers on more 2,430 ha during September.

In **Yemen** mixed populations of various instar hoppers were reported northeast of Hodeidah near Al Qutay on 11 September suggesting that breeding may have taken place in August. A similar situation is expected on the coastal plains in Gulf of Aden where unusually early and good rains were reported over the past months but surveys were not carried out and the situation could not be confirmed. No locusts were reported in the summer breeding areas in **Yemen** or **Oman** or in

Saudi Arabia during September.

Forecast: Adult locusts and hoppers will likely persist and form small swarms in northern **Ethiopia** and later move to the winter breeding areas in eastern part of the country and perhaps reach northern **Somalia** during the forecast period. Groups and small swarms will also form in northern and central **Sudan** west of the Red Sea Hills and move to winter breeding areas in southeastern **Egypt** and northeastern **Sudan**. Coastal areas in **Yemen** and **Saudi Arabia** that received good rains earlier will likely experience locust breeding (CDLCM/Yemen, DLCO-EA, FAO-DLIS, LCC/Oman, PPD/Sudan).

***Vigilant** monitoring and regular surveillance should be maintained, particularly in northeastern **Sudan**, southeastern **Egypt**, eastern **Ethiopia**, Northern **Somalia**, in Tihama and **Saudi Arabia** as well as the coastal plains in Gulf of Aden in **Yemen** (CDLCM/Yemen, DLCO-EA, FAO-DLIS).*

SGR - Eastern Outbreak Region: The SGR situation remained calm in the summer breeding areas along the **Indo-Pakistan** border and only a few scattered adults were reported in these areas (DPPQS/India, FAO-DLIS).

Forecast: The SGR situation will remain calm along the **Indo-Pakistan** borders during the forecast period (DPPQS/India, FAO-DLIS).

Red (Nomadic) Locust (NSE): NSE groups persisted in Ikuu-Katavi

plains in Tanzania. Other outbreak areas in Tanzania, Mozambique, Malawi and Zambia were infested with medium to low density populations. Extensive vegetation burning that has been in progress in most of the outbreak areas has created exposed grounds for egg laying. The International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA) is soliciting resource from its member-states and partners to launch the much needed survey and control operations in affected countries (IRLCO-CSA, OFDA/AELGA).

Forecast: If left unattended before the onset of the seasonal rains, NSE will mate, further develop and migrate from their natural habitat and threaten cropping areas.

Regular surveys and monitoring remain critical to document swarms escaping and plan to intervene and reduce the presence of threatening NSE populations in the outbreak areas. IRLCO-CSA is seeking assistance to abate any serious damage the pest could cause to vulnerable populations (IRLCO-CSA, OFDA-AELGA).

Madagascar Migratory Locust (LMC): A late received update indicated that unfavorable ecological conditions forced low numbers of locust populations to continue concentrating and forming small groups in low laying areas where

vegetation is still green and the soil is wet. In July, only 7,463 ha were treated including areas that were targeted in June, but not treated then. As of July 31st, 1,212,123 ha have been reported treated and/or protected since the current campaign began on September 26, 2013 (DPV-FAO).

Resources: The three phase locust campaign/program has reported received USD 28.2 million from **Austria, Belgium, the European Union, France, Italy, Japan, Madagascar, Norway, the United Nations Central Emergencies Response Fund (CERF) and the United States of America.** In addition, **Algeria, Morocco and Mauritania** donated substantial quantities of pesticides worth millions of dollars as gift-in-kind. The campaign is soliciting an additional USD 9 million for the second phase of the three phase program (DPV-FAO) (Note: expenditure data for the USD 28.2 million reported received is not readily available at this time).

Forecast: Breeding will commence at the foot hills of spring rains and hatching will begin thereafter. However, the situation will likely remain relatively calm through the forecast period.

The airbase will continue monitoring and carrying out surveillance and conducted localized targeted treatments as necessary (DPV-FAO).

Moroccan (DMA), Italian (CIT), Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): A late received update indicated that locust infestations declined in most of CAC counties during August. Intensive control operations in July and unfavorable ecological conditions contributed to the progressive decline of the locust populations. As a result, smaller and fewer outbreaks were treated in **Georgia, Russia, Kyrgyzstan and Armenia** during this period (some 50,000 ha in total 5-10 times less than the previous months).



(Locust prone CAC countries, FAO-ECLO)

Forecast: Egg-bed surveys progressed through September to accurately identify potential hatching spots for the subsequent seasons. Locust activities are expected to have further declined and ended or ending in CAC during the reporting period. No major activities are expected during the forecast period. The situation will remain calm until next spring (FAO-ECLO, OFDA/AELGA).

Tree locusts (*Anacridum* spp.): No updates were received on tree locusts

in Turkana, **Kenya** where control operations were carried out earlier with financial assistance from the UN/FAO (OFDA/AELGA).

Forecast: Tree locusts are not expected to pose a threat in Turkana, **Kenya** during the forecast period (OFDA/AELGA).

Timor and South Pacific: No update was received from East Timor in September.

African Armyworm (AAW): AAW outbreaks were not reported in September in the southern, Central or northern outbreak and or invasion countries (DLCO-EA, IRLCO-CSA).

Forecast: The AAW season will commence in the southern outbreak areas following the seasonal rain sometime in late October into November.

Forecasters in the southern outbreak region are advised to service their traps and rain gages and remain vigilant at all times. AAW activities are not expected in the central or northern outbreak and invasion countries during the forecast period (DLCO-EA, IRLCO-CSA, OFDA/AELGA).

Quelea (QQU): QQU bird outbreaks were reported in Nakuru (Naivasha and Rongai), Nyandarua, Busia and Siaya counties in **Kenya** where the birds were reported attacking wheat and rice. Control operations were in progress in Nyandarua using blasting.

QQU were also reported attacking irrigated wheat in Mashonaland East, Mashonaland Central and Midland Provinces of **Zimbabwe** where ground control operations were while against the pest (IRLCO-CSA).

Forecast: QQU birds will likely remain being a problem to small grain cereal growers (rice) in Kisumu, Siaya, Busia, Kirinyaga and wheat growers in Nakuru, Uasin Gishu and Nyandarua counties of **Kenya**. Mara, Morogoro, and Kilimanjaro Regions in **Tanzania** as well as irrigated winter wheat growers in **Zimbabwe** will experience QQU outbreaks during the forecast period (IRLCO-CSA, OFDA/AELGA).

Vigilance and timely interventions remain essential.

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 QQU colony can contain up to a million or more birds (very common) and is 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 rodent outbreaks reports were received during September. However, rodents remain a constant threat to cereal and other crops and produces in many countries and require regular surveillance and

preventive interventions (OFDA/AELGA).

Front-line countries are advised to remain vigilant. Invasion countries are cautioned to maintain regular monitoring. DLCO-EA, IRLCO-CSA, national PPDs, CNLAs, DPVs, ELOs, and others are encouraged to continue sharing ETOP information with partners and stakeholders as quickly as possible and as often as available. Lead farmers and community forecasters are encouraged to remain vigilant and report any ETOP sightings to concerned authorities immediately.

Inventories of Pesticide Stocks for ETOP Control

Control operations treated less than 4,000 ha (some 3,500 ha in Sudan) during September and pesticide inventory showed no major change (see table below).

Note: *Some inventories shown in the following table are not necessarily current, as many countries tend to issue update after activities are concluded and/or use pesticides for other pests. **End note.***

OFDA/AELGA encourages countries to continue exploring alternative options to minimize and prevent risks associated with pesticide stockpiling.

USAID/OFDA promotes IPM as a safer alternative at all times. A judiciously executed triangulation of surplus stocks from countries with large inventories to where they are much

needed is a win-win situation worth considering.

Note: *Sustainable Pesticide Stewardship improves and strengthens pesticide delivery systems at the national and regional levels. This can be done effectively by establishing strong linkages among neighbouring countries. Such efforts can effectively reduce pesticide related human health risks, minimize and prevent environmental pollution, improve food security and contribute to the national/regional economy. **End note.***

Table 1. Pesticide Inventory of ETOP Frontline Countries

Country	Quantity (l/kg) ^{\$}
Algeria	1,190,000~ ^D
Chad	43,400
Eritrea	-9,985~
Ethiopia	-2,672~
Libya	25,000
Madagascar	351,565~
Mali	32,000 ^D
Mauritania	49,000 ^D
Morocco	3,757,000~ ^D
Niger	42,805~
Oman	14,440
Senegal	156,000~ ^D
Sudan	770,900~
Tunisia	36,575~
Yemen	22,000@ + 300 kg GM~

^{\$}Include different kinds of pesticides in ULV, EC and dust formulations
 ~ data not current
^D = Morocco, Mauritania and Algeria donated/pledged 200,000, 25,000 l, and 30,000 l of pesticides to Madagascar in 2013; Mali donated 21,000 l for NSE to Malawi, Mozambique and Tanzania in 2012 and FAO facilitated the triangulation

Mauritania donated 25,000 and 30,000 l of pesticides to Libya in 2012 and Madagascar in 2013; GM = *GreenMuscle*[™] (fungal-based biological pesticide); @includes donations from Saudi Arabia

LIST OF ACRONYMS

AAW	<i>African armyworm (Spodoptera expempta)</i>	CNLA(A)	<i>Centre National de Lutte Antiacridienne (National Locust Control Center)</i>
AELGA	<i>Assistance for Emergency Locust Grasshopper Abatement</i>	CRC	<i>Commission for Controlling Desert Locust in the Central Region</i>
AFCS	<i>Armyworm Forecasting and Control Services, Tanzania</i>	CTE	<i>Chortoicetes terminifera</i>
AfDB	<i>African Development Bank</i>	DDLC	<i>Department of Desert Locust Control</i>
AME	<i>Anacridium melanorhodon</i>	DLCO-EA	<i>Desert Locust Control Organization for Eastern Africa</i>
APLC	<i>Australian Plague Locust Commission</i>	DMA	<i>Dociostaurus maroccanus</i>
APLC	<i>Australian Plague Locust Commission</i>	DPPOS	<i>Department of Plant Protection and Quarantine Services</i>
Bands	<i>groups of hoppers marching pretty much in the same direction</i>	DPV	<i>Département Protection des Végétaux (Department of Plant Protection)</i>
CAC	<i>Central Asia and the Caucasus</i>	ELO	<i>EMPRES Liaison Officers</i>
CBAMFEW	<i>Community-based armyworm monitoring, forecasting and early warning</i>	EMPRES	<i>Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases</i>
CERF	<i>Central Emergency Response Fund</i>	ETOP	<i>Emergency Transboundary Outbreak Pest</i>
CIT	<i>Calliptamus italicus</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>
CLCPRO	<i>Commission de Lutte Contre le Criquet Pèlerin dans la Région Occidentale (Commission for the Desert Locust</i>	GM	<i>Green Muscle (a fungal-based biopesticide)</i>

<i>ha</i>	<i>hectare (= 10,000 sq. meters, about 2.471 acres)</i>	<i>NSE</i>	<i>Nomadacris septemfasciata</i>
<i>IRIN</i>	<i>Integrated Regional Information Networks</i>	<i>OFDA</i>	<i>Office of U.S. Foreign Disaster Assistance</i>
<i>IRLCO-CSA</i>	<i>International Red Locust Control Organization for Central and Southern Africa</i>	<i>PHD</i>	<i>Plant Health Directorate</i>
<i>ITCZ</i>	<i>Inter-Tropical Convergence Zone</i>	<i>PHS</i>	<i>Plant Health Services, MoA Tanzania</i>
<i>ITF</i>	<i>Inter-Tropical Convergence Front = ITCZ)</i>	<i>PPD</i>	<i>Plant Protection Department</i>
<i>FAO-DLIS</i>	<i>Food and Agriculture Organizations' Desert Locust Information Service</i>	<i>PPSD</i>	<i>Plant Protection Services Division/Department</i>
<i>Hoppers</i>	<i>young, wingless locusts/grasshoppers (Latin synonym = nymphs or larvae)</i>	<i>PRRSN</i>	<i>Pesticide Risk Reduction through Stewardship Network</i>
<i>Kg</i>	<i>Kilogram (~2.2 pound)</i>	<i>QU</i>	<i>Quelea bird</i>
<i>L</i>	<i>Liter (1.057 Quarts or 0.264 gallon or 33.814 US fluid ounces)</i>	<i>SARCOF</i>	<i>Southern Africa Region Climate Outlook Forum</i>
<i>LMC</i>	<i>Locusta migratoriacapito</i>	<i>SGR</i>	<i>Schistoseca gregaria</i>
<i>LMM</i>	<i>Locusta migratoria migratorioides (African Migratory Locust)</i>	<i>SWAC</i>	<i>South West Asia DL Commission</i>
<i>LPA</i>	<i>Locustana pardalina</i>	<i>TAG</i>	<i>Technical Assistance Group</i>
<i>MoAFSC</i>	<i>Ministry of Agriculture, Food Security and Cooperatives</i>	<i>Triangulation</i>	<i>The process whereby pesticides are donated by a country, with large inventories, but often no immediate need, to a 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>MoARD</i>	<i>Ministry of Agriculture and Rural Development</i>	<i>USAID</i>	<i>the United States Agency for International Development</i>
<i>NCDLC</i>	<i>National Desert Locust Control, Libya</i>	<i>UN</i>	<i>the United Nations</i>
<i>NOAA (US)</i>	<i>National Oceanic and Aeronautic Administration</i>	<i>ZEL</i>	<i>Zonocerus elegans, the elegant grasshopper</i>
<i>NSD</i>	<i>Republic of North Sudan</i>		

ZVA *Zonocerus variegatus,*
 the variegated
 grasshopper (This insect
 is believed to be
 emerging as a fairly new
 distractive dry season
 pest, largely due to the
 clearing of its natural
 habitat through
 deforestation, land
 clearing for agricultural
 and other development
 efforts and associated
 weather variability.)

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:

Yeneneh Belayneh,
ybelayneh@usaid.gov

Tel.: + 1-202-712-1859

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Those with access to USAID net can also access AELGA's previous website:
http://chaos.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/