

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

SUMMARY

The Desert Locust (SGR¹) situation remained calm in October in the western outbreak region and only limited breeding occurred in **Mauritania, Niger** and **Chad**. A similar situation may be present in northern **Mali** where surveys were not possible.

In **Sudan**, breeding began in Wadi Oko/Diib and hoppers and adults were reported during October. Aerial and ground operations treated adults and hoppers in more than 20,072 ha during this month. More than 4,515 ha were surveyed in the Afar region of northeastern **Ethiopia** and control operations treated hopper bands and small swarms on 63 ha. In **Eritrea**, early instar hoppers and copulating adults were reported in the northern Red Sea coast and ground operations treated hoppers on 8 ha in cropland during October. The SGR situation was calm in **Yemen** and surveys detected only a few copulating adults and fledglings on the Red Sea coast and Gulf of Aden during the last week of October. Low numbers of

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

adults are present on the Red Sea coasts in **Saudi Arabia**, but no locusts were reported in **Oman** during this month.

The eastern outbreak region remained calm and only a few locusts were detected in the summer breeding areas along the **Indo-Pakistan** borders.

Forecast: Limited-scale breeding may occur in **Mauritania**, but overall the situation will remain calm in the western outbreak region during the forecast period.

Small-scale breeding will increase locust numbers along the Red Sea coasts in **Egypt, Sudan, Yemen** and **Saudi Arabia** during the forecast period. Breeding is also likely to increase locust numbers along the coasts on the Gulf of Aden in **Yemen** where rains fell during October. In **Eritrea** small-scale breeding will continue on the coastal plains and slightly increase locust numbers. The situation will improve in **Ethiopia** during the forecast period. A few adults will likely appear in northwest and southeastern **Somalia** during the forecast period and may breed if ecological conditions become favorable.

The situation will remain calm in the eastern outbreak region along the

Indo-Pakistan borders.

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

OTHER ETOPS

Red (Nomadic) Locust (NSE): The NSE situation continued to be a concern in **Tanzania, Malawi, Mozambique** and **Zambia** where considerable numbers of residual populations are present, but the necessary survey and control operations were not undertaken largely due to lack of resources to reduce NSE populations before they begin breeding (IRLCO-CSA, OFDA/AELGA).

Forecast: Large-scale breeding is expected in the primary outbreak regions in **Tanzania**. Breeding will also commence in **Mozambique, Malawi** and **Zambia** and hatching and hopper formations are expected towards the end of January (IRLCO-CSA, OFDA/AELGA).

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

Madagascar Migratory Locust (LMC): Control operations and cold weather forced locusts into recession and minimized outbreaks and invasions, nevertheless, residual populations continue maturing. Since the beginning of the multi-year locust campaign in September 2013, close to **1,212,125 ha (~3 million acres)** have been controlled/ protection by air and ground means (DPV-FAO).

Residual **Malagasy locust** populations will continue maturing and will begin breeding during the forecast period.

Moroccan (DMA), Italian (CIT), Asian Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): The locust season has ended in CAC and the region will remain calm till March, 2015 (OFDA-AELGA). **African Armyworm (AAW):** No AAW outbreaks were reported in October.

AAW activities are expected to start in the southern outbreak region at the foothills of the seasonal rains. No AAW activities are expected in other outbreak or invasion regions during the forecast period.

Quelea quelea (QQU): QQU birds were reported attacking sorghum in several districts in **Ethiopia** and DLCO aircraft were launched to

control the pest. QQU outbreaks were also reported causing damage to wheat and rice crops in **Kenya** where aerial and ground control operations are in progress (DLCO-EA, IRLCO-CSA).

*In response to an official request from the government of **Burkina Faso**, a team of **Malian** experts from the **National Locust Control Center** and the **Department of Crop Protection** were dispatched on October 26 to control *Quelea* outbreaks in the **Sahel** region of the country (CNLCP/Mali). This is a good example of **south-south** cooperation worth promoting at all levels.*

QQU birds will likely decline during the forecast period due to the seasonal breeding in some countries, but remain to be a concern in others.

OFDA/TAG's Pest and Pesticide unit (Assistance for Emergency Locust/Grasshopper [Pest] Abatement) will continue monitoring ETOP situations closely and issue alerts and updates and 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 a national locust control unit responsible for all SGR activities.

OFDA ETOP Activities and Benefits/Impacts

Financial support 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 conduct regular inventories and make informed decisions to prevent unnecessary accumulations and eliminate obsolescence of pesticide stocks. This practice has enabled countries to avoid costly disposal operations, ensure safety of their citizens and protect their shared environment.

OFDA-sponsored, three year program on scaling up community-based AAW monitoring, forecasting and early warning (CBAMFEW) which was launched in FY 2013 is progressing well. The program aims at reducing the risk of AAW threats to food security and livelihoods of 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 direct supervision from agricultural agents. CBAMFEW project is managed by DLCO-EA and implemented in collaboration with partners in Ethiopia, Kenya and Tanzania. The project has successfully conducted several training and launched an innovative data collection and management technology by farmer forecasters. The initiative technology is being scaled up in Ethiopia and implemented in Kenya and Tanzania. OFDA/TAG intends to work with other partners to expand this innovative technology to other AAW 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.

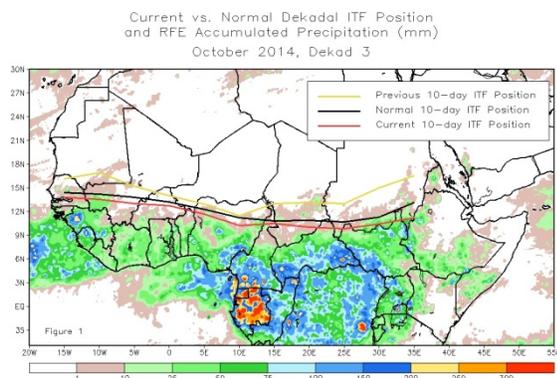
OFDA DRR program aimed at strengthening national and regional capacities for ETOP operations in Central Asia and the Caucasus (CAC) is in progress. The program focuses on improving national and regional capacities and promotes coordinated joint locust monitoring, surveillance, reporting as well as preventive interventions that will minimize ETOP threats to food security and livelihoods of vulnerable populations.

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 information on the weather and ecological conditions, ETOP situation and forecast for the next six weeks is provided hereafter.

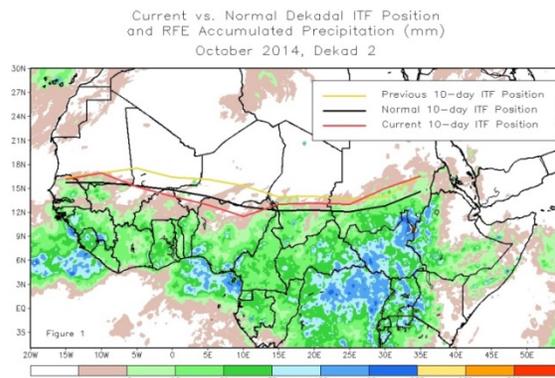
Weather and ecological conditions
 From October 21-31, 2014, the ITF progressed south across both eastern and western sections of Africa. The mean western portion of the ITF (10W to 10E) was approximately at 12.2N, 0.7 degrees south of the climatological mean position and 1.9 degrees south of the previous dekads position. The last dekad of October observed rapid southward movement of the ITF across West Africa and rains were concentrated along the Gulf of Guinea and only light showers were observed across the Sahel.



The mean eastern position of the ITF (20E to 35E) was approximated at 10.3N, 1.2 degrees south of the climatological mean position and 4.1 degrees south of the previous dekad's position. The eastern Africa the Front retreated significantly towards the equator during the last dekad of October causing the largest dekad to dekad difference in position since April 2014.

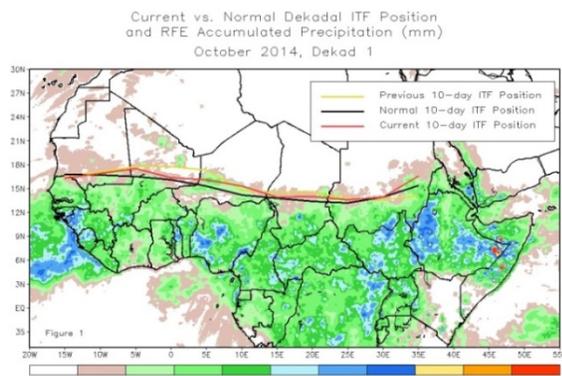
This caused little rainfall across southern Sudan (NOAA, 11/2014).

During the 2nd dekad of October, the ITF advanced farther south across Africa, particularly the central portions of West Africa, but near stationary over Eastern Africa. This uneven movement resulted in below-average rainfall over parts of the Sahel unlike sustained enhanced rains, with above-average rainfall over south-central and eastern **Sudan**. The western (10W-10E) portion of the ITF was near 14.1N, which was to the south of the average position by 0.4 degree for this time of the year. The unusual southerly position was associated with weaker southerly flow across the Gulf of Guinea region.



On the other hand, the eastern (20E-35E) portion of the ITF positioned itself near 14.4N and was located north of the climatology by 1.5 degrees. This anomalous northerly position was partially caused by strong winds blowing from the southeast during the period. The above map shows the ITF position relative to the long-term average position for the second dekad of October and its previous position during the first dekad of October (NOAA, 11/2014).

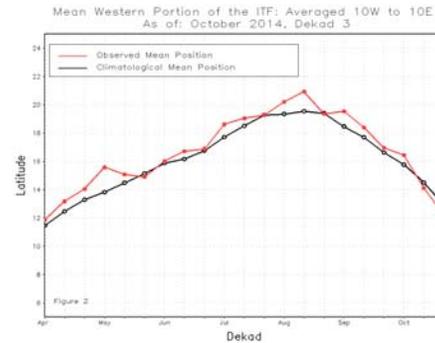
During the first dekad of October, the ITF remained nearly stationary relative to its position during the 3rd dekad of September moving slightly north of the climatology. This anomalous position was partially attributed to continued vigorous southerly winds in parts of West Africa and Eastern Africa. The mean western (10W-10E) portion of the ITF was approximated at 16.4N, which was to 0.8 degrees north of the average position. As a result, above-average rainfall was observed across much of the Sahel, including central **Mali** and central **Niger**. To the east, the mean eastern (20E-35E) was located at 14.5N, which was also 0.5 degree north of its long-term average position.



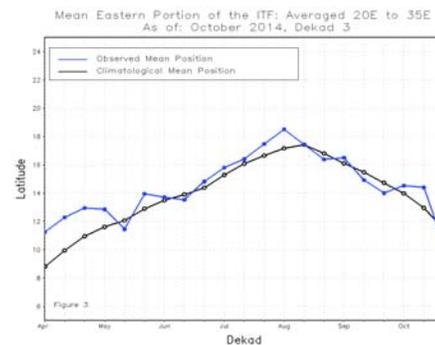
As a result above average rainfall was reported across much of southern and eastern Sudan. The above map shows ITF position during the 1st dekad of October relative to its long-term average position for this time of October, and its previous position during the third dekad of September (the below graphs A and B are time series illustrating the mean latitudinal values of the western and eastern portions of the ITF, respectively, and their observed

progressions since April, 2014 (NOAA, 11/2014).

A Western region



B Eastern region



In **Yemen**, vegetation was generally green with low to medium density and the soil was mostly wet in several places in surveyed areas in Tihama and the Gulf of Aden coastal plains where rainfall was recorded during the 1st dekad of October. In **Oman**, vegetation continued to dry out in the SGR breeding areas. Only limited rain fell in Musandam, Dhahera, Dakhiliya, and South Battinah during the 1st dekad of October (DLMCC/Yemen, LCC/Oman).

Low tempers and dry conditions persisted and ecological conditions remained unfavorable in **Libya**. Ecological conditions were favorable in some places in central, southern and

south-eastern parts of **Mauritania** during this month (CNLA/Mauritania, NCDLC/Libya).

Hot weather prevailed and significant amount of rain was reported near NSE outbreak areas in **Tanzania**, heavy rainfall was recorded near Malagarasi Basin and will likely create ideal conditions for egg laying (IRLCO-CSA).

Note: *Changes in the weather pattern can contribute to ecological shift in ETOP habitats and increase the risk of pest outbreaks, resurgence and even emergence of new pests. 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 forecast 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** during October.

In **Mali**, the SGR situation remained calm and only solitary mature adults and various instar hoppers were detected in Wadi Tahalt in Markouba and Wadi In-Chekar in Tilemsi Valley among *Schouvia vegetation*. Scattered solitary adults were also found on the west side of the Adrar des Iforas (CNLA/Chad, CNLA/Mauritania, CNLCP/Mali, CNLA/Tunisia, FAO-DLIS, NCDLC/Libya)

Forecast: Limited-scale breeding may occur in **Mauritania** and **Mali**, but overall the situation will remain calm in the western outbreak region during the forecast period (CNLA/Mali, CNLA/Mauritania, CNLA/Tunisia, FAO-DLIS, NCDLC/Libya).

SGR (Desert Locust) - Central

Outbreak Region: SGR persisted in part of the central outbreak region. In **Sudan**, winter breeding has begun in Wadi Oko/Diib north of Tomala where 2nd to 4th instar hoppers and immature and mature adults were reported late October and egg laying was observed on the Red Sea coast south of Suakin during this month. Aerial and ground operations controlled adults and hoppers on more than 20,072 ha during this month (PPD/Sudan). A few adults were controlled in along Lake Nassi in southern **Egypt** during this month.

Ground surveys that covered more than 4,515 ha in seven districts (Mile, Chifera, Yalo, Geregera, Awra, Gulina and Ewa) in the Afar Region in northeastern **Ethiopia** detected ten 5th instar hopper bands

ranging in size from 250 to 1,500 m² and fledglings on a total of 13 ha. Three immature small swarms were also observed on 100 ha in the region. Control operations treated ten hopper bands and two swarms on a total of 63 ha using Malathion during this month. Surveys covered Karora and Shieb on the Red Sea coast in **Eritrea**. Hoppers detected and were controlled on 8 ha in cropping areas. Copulating adults were detected on some 300 ha at the same location (DLCO-EA).

In **Yemen**, surveys were carried out from 26 to 31 October on the Red Sea coast and the Gulf of Aden (financial support was provided by the FAO Office in Sana'a and through TCP). Solitary mature and immature adults were detected in several places in areas between Al Zuhrah (1541N/4300E), Midi (1619N/4248E) and east and south of Hodiedah (1450N/4258E). Scattered immature and mature adults were present north and northwest of Aden close to the nearby mountains. A few solitary 3rd to 5th instar hoppers were seen at one location near Am Rija (1302N/4434E) northwest of Ade (1250N/4503E). Low numbers of immature and mature solitary adults were seen in a few places east of Zinjibar (1306N/4523E). No Locusts were reported in the summer breeding areas in the interior of Marib, Al Jawf, Shabwah and Hadhramout Governorates during October. Low numbers of adults are present on the Red Sea coasts in **Saudi Arabia**, but no locusts were reported in **Oman** during this month (CDLCM/Yemen, FAO-DLIS, LCC/Oman).



(SGR situation, FAO-DLIS, 11/2014)

Forecast: More hoppers, adults groups and swarms will likely form in the winter breeding areas between the Nile Valley and the Red Sea Hills in **Sudan**. Adult will move east and reach Tokar Delta and Wadi Oko/Diib in northeast **Sudan** and southeastern **Egypt** on the Red Sea coast during the forecast period. Small-scale breeding will cause locust numbers to increase along the Red Sea coasts in Egypt, Sudan, Yemen and Saudi Arabia during the forecast period. Breeding is also likely to increase locust numbers along the coasts on the Gulf of Aden in **Yemen** where rains fell during October. In **Eritrea** breeding will continue on the coastal plains and slightly increase locust numbers. The situation will decline in northeast **Ethiopia** and no further developments are likely. Low numbers of adults will likely to appear and begin breeding on the coastal plains in the northwest **Somalia** provided ecological conditions become favorable. Locust activities may also occur in winter breeding areas in southeastern part of the country where moderate rainfall was reported during this month. SGR activities are not expected in **Oman** during the forecast period (CDLCM/Yemen, DLCO-EA LCC/Oman, PPD/Sudan).

Active monitoring and surveillance remain essential, particularly in northeastern

Sudan, southeastern Egypt, Eritrea, Somalia and winter breeding areas 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 (DPPQS/India, FAO-DLIS).

Forecast: The SGR situation will remain calm in the eastern outbreak region along the **Indo-Pakistan** borders (DPPQS/India, FAO-DLIS).

Red (Nomadic) Locust (NSE): The NSE situation continues to be a concern in outbreak areas where medium to high density residual populations persisted. In **Tanzania**, swarms and groups that were detected in Ikuu-Katavi plains during survey in June 2014 persisted whereas medium density populations are likely to have persisted in Wembere and Malagarasi Basin. Necessary surveys and timely preventive interventions to reduce NSE populations did not materialize due to lack of resources. Escapee populations infested Lake Chilwa plains after control operations were undertaken in August, 2014. Low to medium density populations are expected to have infested Buzi-Gorongosa and Dimba plains in **Mozambique** and Kafue Flats in **Zambia** during that time (IRLCO-CSA, OFDA/AELGA).

Forecast: Breeding will commence at the foothills of the seasonal rains. Massive egg-laying and large-scale breeding are likely towards the end of January in Ikuu-

Katavi, Wembere and Malagarasi Basin in **Tanzania** and in Lake Chilwa plains in **Mozambique** and **Malawi** where considerable residual populations are present and extensive grass burning created suitable conditions. Kafue Flat in **Zambia** will likely witness increased breeding during the forecast period. 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): Control operations and cold weather further reduced locust populations in the primary outbreak areas, but residual populations are maturing. Since the beginning of the multi-year locust campaign in September 2013, close to **1,212,125 ha (~3 million acres)** have been controlled/protection by air and ground means (DPV-FAO).

Resources: The ongoing locust campaign has reported USD 28.2 million received from multiple donors and the GoM, \$24 million of which is expected to have been used up and part of the remaining funds may only be available through end of February, 2015. The campaign is soliciting an additional USD 9 million for the second phase of the program. A helicopter was added to the fleet of 5 aircraft. Aerial monitoring and need-based control operations are in effect (DPV-FAO).

Forecast: Locusts will mature and breeding will begin at the foothills of spring rains and hatch thereafter (DPV-FAO).

Moroccan (DMA), Italian (CIT), Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): No update was received from the CAC in October, but the locust season is expected to have ended (OFDA-AELGA).



(Locust prone CAC countries, FAO-ECLO)

Forecast: CAC region will remain calm until March, 2015 when ecological conditions will allow locusts hatch and start developing (OFDA-AELGA).

Timor and South Pacific: No update was received on the acridid situation from East Timor in October, but the ETOP season is expected to have begun.

African Armyworm (AAW): AAW activities were not reported in October in the primary breeding areas (DLCO-EA, IRLCO-CSA).

Forecast: The AAW season will commence in the southern outbreak areas during the forecast period. Forecasters in the southern outbreak region are advised to

remain vigilant and service their traps and rain gages. AAW activities are not expected in the central or northern outbreak and invasion countries during the forecast period (IRLCO-CSA, OFDA/AELGA).

Quelea (QQU): QQU bird outbreaks were reported in five districts in **Ethiopia**. The birds were reported attacking sorghum crops and roosting on Typhea, eucalyptus and/or acacia trees. Two DLCO-EA spray aircraft were deployed to control the outbreaks in Amhara and Oromiya regions from 15-30 October and QQU roosts and colonies were controlled on more than 3500 ha. QQU bird outbreaks were also reported causing damage to wheat and Rice crops in Nakuru, Nyandarua, Kirinyaga and Siaya Counties in **Kenya**. Aerial and ground control operations were in progress at the time this report was compiled (DLCO-EA, IRLCO-CSA, OFDA-AELGA).

*In response to a request by the Government of **Burkina Faso**, a team of **Malian experts** from the **Locust Control Center and the Department of Crop Protection** were dispatched on October 26 to **control QQU bird outbreaks** in the **Sahel region of Burkina Faso** (CNLCP/Mali).*

Forecast: QQU birds will begin declining in **Kenya** and **Ethiopia**, but some activities will likely continue in other outbreak areas during the forecast period. *Vigilance and timely interventions remain essential at all times* (IRLCO-CSA, OFDA/AELGA).

Facts: *QQU birds can travel ~100 km/day looking for food.*

An adult QQU bird can consume 3-5 gram 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 outbreak reports were received during October. However, rodents remain a constant threat to crops and produces in many countries. Regular surveillance and preventive interventions remain critical to avoid any major threats (OFDA/AELGA).

Front-line countries should remain vigilant. Invasion countries are should 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 ETOP detections to relevant authorities immediately.

Inventories of Pesticide Stocks for ETOP Control

Control operations treated 20,143 ha (20,072 in Sudan, 63 ha in Ethiopia and 8 ha in Eritrea) in October.

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

Note: *Sustainable Pesticide Stewardship (SPS) improves and strengthens pesticide delivery systems at the national and regional levels. 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. SPS can be effectively established through linkages among neighbouring countries.*

End note.

Table 1. Inventory of ETOP Pesticides in Frontline Countries

Country	Quantity (l/kg) ^{\$}
Algeria	1,190,000~ ^D
Chad	43,400
Eritrea	-9,993~
Ethiopia	-2,675~
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	750,828~
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*TM (fungal-based biological pesticide);
 @includes donations from Saudi Arabia

Bands groups of hoppers marching pretty much in the same direction
CAC Central Asia and the Caucasus
CBAMFEW Community-based armyworm monitoring, forecasting and early warning
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(A) Centre National de Lutte Antiacridienne (National Locust Control Center)
CRC Commission for Controlling Desert Locust in the Central Region
CTE *Chortoicetes terminifera*
DDLC Department of Desert Locust Control
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

LIST OF ACRONYMS

AAW African armyworm (*Spodoptera expempta*)
AELGA Assistance for Emergency Locust Grasshopper Abatement
AFCS Armyworm Forecasting and Control Services, Tanzania
AfDB African Development Bank
AME *Anacridium melanorhodon*
APLC Australian Plague Locust Commission
APLC Australian Plague Locust Commission

<i>ETOP</i>	<i>Emergency Transboundary Outbreak Pest</i>	<i>MoARD</i>	<i>Ministry of Agriculture and Rural Development</i>
<i>Fledgling</i>	<i>immature adult locust /grasshopper that has pretty much the same phenology as mature adults, but lacks fully developed reproductive organs to breed</i>	<i>NCDLC</i> <i>NOAA (US)</i> <i>NSD</i> <i>NSE</i> <i>OFDA</i>	<i>National Desert Locust Control, Libya</i> <i>National Oceanic and Aeronautic Administration Republic of North Sudan</i> <i>Nomadacris septemfasciata</i> <i>Office of U.S. Foreign Disaster Assistance</i>
<i>GM</i>	<i>Green Muscle (a fungal- based biopesticide)</i>	<i>PHD</i>	<i>Plant Health Directorate</i>
<i>ha</i>	<i>hectare (= 10,000 sq. meters, about 2.471 acres)</i>	<i>PHS</i>	<i>Plant Health Services, MoA Tanzania</i>
<i>IRIN</i>	<i>Integrated Regional Information Networks</i>	<i>PPD</i>	<i>Plant Protection Department</i>
<i>IRLCO-CSA</i>	<i>International Red Locust Control Organization for Central and Southern Africa</i>	<i>PPSD</i>	<i>Plant Protection Services Division/Department</i>
<i>ITCZ</i>	<i>Inter-Tropical Convergence Zone</i>	<i>PRRSN</i>	<i>Pesticide Risk Reduction through Stewardship Network</i>
<i>ITF</i>	<i>Inter-Tropical Convergence Front = ITCZ)</i>	<i>QU</i> <i>SARCOF</i>	<i>Quelea bird</i> <i>Southern Africa Region Climate Outlook Forum</i>
<i>FAO-DLIS</i>	<i>Food and Agriculture Organizations' Desert Locust Information Service</i>	<i>SGR</i> <i>SWAC</i>	<i>Schistoseca gregaria</i> <i>South West Asia DL Commission</i>
<i>Hoppers</i>	<i>young, wingless locusts/grasshoppers (Latin synonym = nymphs or larvae)</i>	<i>TAG</i>	<i>Technical Assistance Group Triangulation</i>
<i>Kg</i>	<i>Kilogram (~2.2 pound)</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>L</i>	<i>Liter (1.057 Quarts or 0.264 gallon or 33.814 US fluid ounces)</i>		
<i>LMC</i>	<i>Locusta migratoriacapito</i>		
<i>LMM</i>	<i>Locusta migratoria migratorioides (African Migratory Locust)</i>		
<i>LPA</i>	<i>Locustana pardalina</i>		
<i>MoAFSC</i>	<i>Ministry of Agriculture, Food Security and Cooperatives</i>		

USAID	<i>the United States Agency for International Development</i>	<i>website which contains archived documents:</i>
UN	<i>the United Nations</i>	http://chaos.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/
ZEL	<i>Zonocerus elegans, the elegant grasshopper</i>	
ZVA	<i>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.)</i>	

Who to Contact:

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

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For those of you who are on the USAID net, you can also access AELGA's former