Emergency Transboundary Outbreak Pest (ETOP) Situation Update for March with a Forecast till mid-May, 2015

SUMMARY

Desert Locust (SGR[1]) activities continued improving in March in winter breeding areas along the Red Sea coasts.

In **Sudan**, survey and control operations continued in the central and southern Red Sea coastal areas and treated immature adult groups and swarms on 12,626 ha during March. The locusts migrated from northern **Eritrea** into the central and southern Red Sea coasts in **Sudan**. Limited control was carried out in **Eritrea** and coastal **Saudi Arabia** during this month. The situation remained relatively calm in **Yemen** and no locusts were reported in **Oman**, **Ethiopia**, **Somalia** or elsewhere in the central outbreak region during this month (PPD/Sudan).

Chad, **Libya, Mali**, **Mauritania**, **Morocco**, **Niger** and **Tunisia** reported no locust and only a few isolated solitary adults were detected in a few places during this month.

No locusts were observed in **India** and overall the situation remained calm in the eastern outbreak region in southwest Asia during March.

Forecast: Limited scale breeding may appear in spring breeding areas northwestern Africa, the interior of the Arabian Peninsula, and southeast Iran and southeast Pakistan, but significant developments are not likely during the forecast period.

OTHER ETOPS

Red (Nomadic) Locust (NSE): Hoppers were treated on 2,600 ha in Ikuu-Katavi plains in March and immature adults were reported in North Rukwa plains and Malagarasi Basin and isolated scattered populations were detected in Bahi Valley as well as South Rukwa and Wembere plains (IRLCO-CSA).

Forecast: Adult groups and small swarms will likely form in **Malawi**, **Mozambique, Tanzania** and **Zambia** during the forecast period. IRLCO-CSA is planning to conduct survey to assess and determine control operations in the locust situation in North Rukwa plains during the forecast period (IRLCO-CSA).

Cataloipus sp., a grasshopper, outbreak was reported attacking maize and sorghum in Sofala province in central **Mozambique**. The pest was

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

controlled by affected farmers with assistance from the Ministry of Agriculture (IRLCO-CSA).

Madagascar Locust Update: Locust control continued against mixed populations of adults and hoppers in Betsiriry valley and in areas east of Manja and south of Mandabe - a clear indication of continued locust activities. The coastal and sub-coastal areas in the southwest where locusts normally breed during February were not impacted by the tropical storm Fundi (DPV-FAO).

Moroccan (*DMA*), **Italian (*CIT*), Asian Migratory (*LMI*) Locusts** in Central Asia and the Caucasus (CAC): No locusts were reported in CAC region in March. Hatching will begin as temperatures rise, but significant developments are not likely during the forecast period (OFDA-AELGA).

African Armyworm (AAW): AAW outbreaks were not reported in most of the IRLCO-CSA or DLCO-EA member states (IRLCO-CSA).

Forecast: AAW outbreaks will likely occur in **Kenya** and northern **Tanzania** during the forecast period, but significantly decline in **Malawi, Mozambique, Zambia and Zimbabwe** as the seasonal rains diminish (IRLCO-CSA, OFDA/AELGA).

***Quelea quelea* (QQU)**: QQU bird outbreaks were reported causing damage to rice and other small grain cereal crops in **Kenya, Tanzania** and **Zimbabwe** during March (IRLCO-CSA).

Forecast: QQU bird outbreaks will continue threatening maturing small grain crops in **Kenya**, T**anzania** and **Zimbabwe** during the forecast period (IRLCO-CSA, OFDA/AELGA).

Active surveillance, monitoring and timely preventive interventions remain essential to avoid unexpected surprises in all ETOP breeding and outbreak countries. Invasion countries are advised to remain vigilant and execute essential preventive interventions as often as necessary to secure their crops and pasture

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

*Thanks to increased awareness among key national authorities and support from key development partners, including USAID, key 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 unit responsible for all preventive SGR activities.

OFDA ETOP Activities and Benefits/Impacts

Financial assistance from USAID/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 can now maintain up to date inventories and make informed decisions to prevent unnecessary accumulations of obsolete pesticide stocks. This system has enabled many countries to prevent unnecessary procurement or hording of pesticides, avoid costly disposal operations, improve health and safety of their citizens and protect their shared environment.

The OFDA-sponsored tri-state program on scaling up community-based armyworm monitoring, forecasting and early warning (CBAMFEW) is on track. The program aims at reducing the threats of AAW to food security and livelihoods of vulnerable populations through improved information collection, analysis and reporting. (see picture of trainers training in Kenya on the right column)

OFDA Advisor for Pesticides and Pests 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.

The CBAMFEW project, being managed by DLCO-EA, is jointly implemented in more than 240 villages in 30 districts in three countries in close collaboration with partners in ***Ethiopia****,* ***Kenya*** *and* ***Tanzania*** *– click bit.ly/1C782Mk to view project sites in the three countries (this map is a dynamic work in progress and will continuously updated with additional important data layers).*

The CBAMFEW has successfully conducted several training programs, national, district and village meetings and workshops as well as launched an innovative mobile phone-based data collection and management technology. This innovative 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 benefit other AAW affected countries.

Photo courtesy: DLCO-EA

OFDA continued its support for sustainable pesticide risk reduction initiatives through stewardship network (SPRRSN). This initiative is aimed at strengthening capacities of host-countries and partners to help reduce the risks of pesticide to safety of vulnerable populations and their assets as well as the environment.

OFDA/TAG has successfully launched two sub-regional SPRRSNs in Eastern Africa and the Horn. The Horn of Africa SPRRSN initiative has created an Association dubbed as Pesticide Stewardship Association-Ethiopia (PSA-E) and PSA-E is considered a model for future similar initiatives.

OFDA-TAG has plans to extend the SPRRSN initiative to other parts of Africa, the Middle East, CAC and other regions. In his recent visit, OFDA Senior Technical Advisor for Pesticides and Pests observed PSA-N activities in Ethiopia and noted progresses and constraints among beneficiaries.

OFDA continued its support for capacity strengthening programs through an agreement with FAO. This DRR program assists frontline 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 which is aimed at strengthening national and regional capacities for ETOP operations in Central Asia and the Caucasus (CAC) is on track. In additional to improving national and regional capacities, this program also promotes collaboration and coordination of joint monitoring, surveillance, reporting and preventive interventions to minimize ETOP threats to food security and livelihoods of vulnerable populations.

***Note:** All ETOP SITREPs can be accessed on USAID/OFDA Pest and Pesticide Management 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 ETOP situation, the weather and ecological conditions and forecast is provided hereafter.

Weather and ecological conditions:

Most of the western SGR outbreak regions remained fairly dry during March except for a few places in spring breeding areas in part of **Morocco** and in **Niger** reported some precipitation during this period (CNLA/Chad, CNLA/Mali, CNLA/Mauritania, CNLAA/Morocco, CNLA/Niger, CNLA/Tunisia, NCDLC/Libya).

A few places in central and southern Red Sea coastal in **Sudan** received light to moderate rains during March. Light to heavy rains, at times causing flooding, were reported in the summer breeding

areas in Al Jawf, Marib, Shabwah and Hadhramout governorates and in a few places in winter breeding areas along the Red Sea coast in **Yemen** during the first half of March. The eastern SGR outbreak areas in southwest Asia received good rains during March and as a result breeding conditions will improve during the forecast period.

Normal to above normal rain was recorded in several places in the NSE outbreak areas in **Tanzania** and **Mozambique** during March (see Table from IRLCO-CSA).

Country	Station	Rainfall mm
Tanzania	Masenge (Wembere plains)	33.7
Tanzania	Kaliua (Malagarasi Basin)	321
Tanzania	Muze (Rukwa Valley Plain)	138
Mozambique /Malawi	Ntanja (Lake Chilwa/ Lake Chiuta plains)	55
Mozambique /Malawi	Makoka ((Lake Chilwa/ Chiuta plains)	6.2
Mozambique	Caia (Dimba plains)	133
Mozambique	Mafambisse (Buzi-Gorongosa plains)	145

Madagascar experienced severe flooding in February in Antananarivo and the surrounding areas as far as Tsiroanomandity and other locust affected regions. The flooding resulted from tropical storms Chedza that hit the region in January and Fundi that occurred on February 07. The situation was exacerbated by subsequent heavy rainfall through the week of February 26.

Significant meteorological activities were not reported in the eastern SGR outbreak areas or the CAC region during March.

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. 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 in* ***Uzbekistan****.*

The ***Asian migratory locust****, once a univoltin (a single generation per year) insect, recently began exhibiting two generations per year. These anomalous manifestations and phenomena are a serious concern to farmers, rangeland managers, crop protection experts and others. Regular monitoring and documenting anomalous manifestations in pest behavior and habitats and timely reporting remain critical.* ***End note****.*

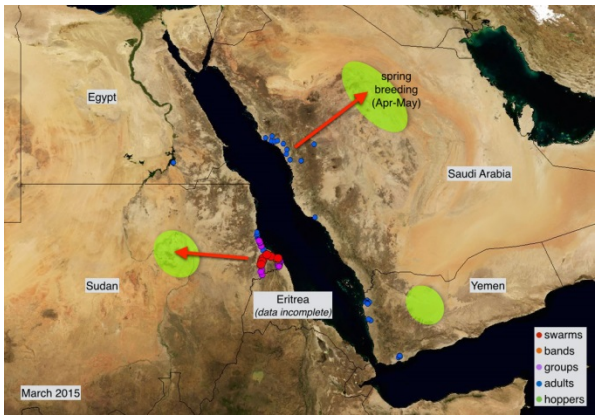
Detailed Accounts of ETOP Situation and Forecast for the Next Six Weeks

SGR – Western Outbreak Region: The SGR situation remained calm in **Chad**, **Libya Mali**, **Mauritania**, **Morocco**, **Niger** and **Tunisia** an only solitary isolated adults were detected in a few places during this month. Surveys were not conducted and locusts were not reported i **Niger**, but it is likely that some isolated scattered solitary adults are present in Tamesna and Air (CNLA/Chad, CNLCP/Mali, CNLA/Mauritania, CNLAA/Morocco, CNLA/Niger CNLA/Tunisia, NCDLC/Libya).

Forecast: Adult locusts will be present in a few places in northern **Mal**i, southern **Mauritania** and **Morocco**, and northern **Niger** during the forecast period, but significant developments are not likely.

SGR (Desert Locust) – Central Outbreak Region: SGR persisted in winter breeding

areas along the southern Red Sea coasts during March. In **Sudan**, survey and control operations persisted in the winter breeding areas in the central and southern Red Sea coastal areas between Suwakin and Toker Delta and in Aiterba, Agitay, Karora and parts of Khor Baraka tributaries. Immature adult groups and swarms were controlled on 12,626 ha during this month. Locusts migrated from northern **Eritrea** into the central and southern Red Sea coasts. Control operations continued in **Saudi Arabia** (440 ha) and **Eritrea** (1,414 h) during this month. The situation remained relatively calm in **Yemen** and no locusts were reported in **Oman**, **Ethiopia**, **Somalia** or elsewhere in the central outbreak region during this month. Locusts were reported mainly along the southern Red Sea coastal areas from Karora, Abobana, Aiterba and along Khor Baraka stream up to the Tokar Delta (PPD/Sudan).



SGR situation (FAO-DLIS, 4/2015).

In **Yemen**, the situation remained calm and only a few immature and mature solitary adults were seen in some locations in the central and northern parts of the Red Sea coast, east of Hodeidah and between Al Zuhrah and Midi. Isolated and scattered adults were also present in wadis northwest of Aden mainly near Am Rija area during March. Locust activities persisted on the coastal areas in **Eritrea** and **Saudi Arabia** where control operations were continued, but no locusts were reported in **Ethiopia**, **Somalia**, **Oman** or elsewhere in the central outbreak region during this month (DLMCC/Yemen, LCC/Oman).

Forecast: Small-scale breeding will likely occur in spring breeding areas in **Saudi Arabia** and perhaps **Yemen** but other countries in the central region will likely remain relatively calm during the forecast period (DLMCC/Yemen, FAO-DLIS, LCC/Oman, PPD/Sudan).

SGR - Eastern Outbreak Region: The SGR situation remained calm in **India** and **Pakistan** and only a few isolated adults were observed in southeastern **Iran** during March.

Forecast: The SGR situation will remain relatively calm in the eastern outbreak region and only small-scale breeding will likely occur along the southeastern **Iran** and southwestern **Pakistan** borders during the forecast period.

Red (Nomadic) Locust (NSE): Medium to high density 4th– 6th instar NSE hoppers were detected during aerial surveys carried out in Ikuu-Katavi plains and aerial operations controlled hoppers and adults on more than 2,600 ha using DLCO-EA spray aircraft during March. An estimated 8,000 ha needed to be controlled in Ikuu-Katavi plains to bring the current locust population under control. Low density immature adults were reported in North Rukwa plains and Malagarasi Basin and isolated and scattered populations were detected in South Rukwa and Wembere plains and Bahi Valley in **Tanzania**. Fledging is expected to have begun in **Malawi, Mozambique** and **Zambia** as well as in Lake Chilwa/Lake Chiuta plains in **Malawi**, Buzi-

Gorongosa and Dimba plains in **Mozambique** and Kafue Flats in **Zambia**.

Forecast: Swarms will likely develop in the primary outbreak areas in **Tanzania** as well as in Lake Chilwa/Lake Chiuta plains in **Malawi**, Kafue Flats in **Zambia** and Buzi-Gorongosa plains in **Mozambique**. IRLCO-CSA is planning to assess the severity of the locust situation in North Rukwa plains and determine control operations during the forecast period. Control operations launched in Ikuu-katavi and North Rukwa plains in **Tanzania** are expected to reduce locust numbers. Locusts will concentrate in Malagarasi Basin and Wembere plains due to extensive grass burning expected to start as the dry season approaches. To the extent possible, IRLCO-CSA intends to continue survey during the coming several months and launch control operations as necessary to reduce potential swarming populations (IRLCO-CSA).

Frontline countries need to collaborate with the IRLCO-CSA and carry out intensive surveys to establish the status of NSE populations and ready for preventive and curative control interventions to avoid loss crops and pasture.

Active surveillance, monitoring and preventive interventions remain critical to detect and abate the movement of hopper bands and swarms from breeding habitat and cause significant damage to crops and pasture.

The International Red Locust Control Organization for Central and Southern Africa continues appealing for resources from its member-states and partners to launch timely and essential survey and control operations in frontline countries *and abate potentially devastating threats to food security and livelihoods of vulnerable populations in the region*.

Madagascar Migratory Locust (LMC): In **Madagascar**, locust activities continued. Adult populations were dispersed by gusty winds associated with tropical storm Fundi and reached unflooded vast areas suitable for breeding. Control operations were carried out against adult groups and swarms in Betsiriry valley in the central part. Gregarious late-instar hoppers and immature young adults are being controlled in areas east of Manja and south of Mandabe. The coastal and sub-coastal areas in the southwestern areas where locusts breed during February were not affected by the tropical storms.

Forecast: Locusts will continue appearing and threatening food security and livelihoods of millions of chronically food-insecure people.

Italian (CIT), Moroccan (DMA) and Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): No update was received and major activities were not expected during March due to cold weather (OFDA-AELGA).

Forecast: CAC region may see small-scale locust activities during the forecast period (OFDA-AELGA).

Italian, Migratory and Moroccan *locusts are a constant threaten to the CAC region. These pests can profusely multiply and attack tens of millions of hectares of cropping land pasture land and affect livelihoods of more than 20 million vulnerable rural inhabitants that eke a living primarily from farming and herding. With the ability to travel more than 100 km (60 miles) each day, these locusts can decimate dozens of hectares of cereal crops, pasture, cotton, fruit trees, leguminous plants, sunflower, tobacco, vineyard, vegetable and others over vast areas. Most of the countries affected by the three locust*

species are relatively new and lack the capacity to effectively prevent and control the pest (The once robust centralized pest control capacity in these countries disappeared with the downfall of the Soviet system leaving each country to fetch for itself).

Currently, USAID/OFDA is sponsoring a modes grant through the UN/FAO to help strengthen/build national and regional capacity to prevent and control the threats these notorious pests pose to vulnerable populations in these regions.

Timor and South Pacific: No update was received from East Timor in March, but ETOP presence is likely.

African Armyworm (AAW): AAW outbreaks were not reported in the southern outbreak areas, but activities are expected in the north-central outbreak regions in **Tanzania** and parts of **Kenya** (IRLCO-CSA, OFDA/AELGA).

Forecast: AAW outbreak will continue in **Kenya** and **Tanzania** during the forecast period IRLCO-CSA, OFDA/AELGA).

Quelea (QQU): QQU bird outbreaks were reported causing damage to rice in Kisumu county, Taita Taveta and Siaya counties in **Kenya**. The birds were also reported in Shinyanga and Mwanza regions in **Tanzania**. Limited outbreaks were reported on small grain farms in Mt. Darwin and Mukumbura districts in Mashonaland Central province, Mana pools in Mashonaland West province, Gutu district in Masvingo province and Gwanda district in Matebeleland South province in **Zimbabwe** where MoA was providing assistance to affected farmers to control the pest (IRLCO-CSA, OFDA/AELGA).

Forecast: QQU birds will likely continue posing a problem to small grain cereal growers (rice, sorghum, wheat) in **Kenya** **Tanzania** during the forecast period (IRLCO-CSA, OFDA/AELGA).

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 medium density QQU colony can contain up to a million or more birds and 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 update was received on rodents in March. However, this pest is a constant threat to crops and other products and requires active surveillance and preventive interventions to avoid major threats (OFDA/AELGA).

Front-line countries must remain vigilant. Invasion countries should maintain regular monitoring. DLCO-EA, DLCCs, IRLCO-CSA, national PPDs, CNLAs, DPVs, ELOs, etc., are encouraged to continue sharing ETOP information with stakeholders as often and as early as possible. Lead farmers and community forecasters must remain vigilant and report ETOP detections to relevant authorities immediately.

Inventories of Pesticide Stocks for ETOP Control

Control operations treated 12,626 ha in **Sudan**, 1,414 ha in **Eritrea** and 440 ha in **Saudi Arabia** during March.

Note: Some of the data on pesticide inventories provided in the following table are not necessarily current due to the fact that some countries tend to issue updates after activities are concluded and/or use pesticides for other pests. **End note**.

OFDA/AELGA encourages countries to continue exploring alternatives 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 countries where they are much needed is a win-win situation worth considering.

Note: *A Sustainable Pesticide Stewardship (SPS) can considerably strengthen pesticide delivery system (PDS) at the national and regional levels. A strong PDS can effectively reduce pesticide related human health risks, minimize environmental pollution, increase food security and ultimately contribute to the national economy. An SPS can be effectively established by linking key stakeholders in neighbouring countries.*

End note.

Table 1. ETOP Pesticide Inventory in Frontline Countries

Country	Quantity (l/kg)[$]
Algeria	1,190,000~[D]
Chad	43,400
Eritrea	-16,897~
Ethiopia	-3,975~
Libya	25,000~
Madagascar	351,565~
Mali	32,000 [D]
Mauritania	43,400
Morocco	3,757,000~[D]
Niger	75,800
Oman	14,440
Senegal	156,000~[D]
Sudan	632,718~
Tunisia	36,575~
Yemen	22,000@ + 300 kg GM~

[$]Includes 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	*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*
Bands	*groups of hoppers marching pretty much in the same directior*
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 Criquett 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 Deser 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*
ETOP	*Emergency Transboundary Outbreak Pest*
Fledgling	*immature adult locust /grasshopper that has pretty much the same phenology as mature adults, but lacks fully developed reproductive organs to breed*
GM	*GreenMuscle® (a fungal-based biopesticide)*
ha	*hectare (= 10,000 sq. meters, about 2.471 acres)*
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*
Hoppers	*young, wingless locusts/grasshoppers (Latin synonym = nymphs or larvae)*
Kg	*Kilogram (~2.2 pound)*
L	*Liter (1.057 Quarts or 0.264 gallon or 33.814 US fluid ounces)*
LMC	*Locusta migratoriacapito*
LMM	*Locusta migratoria migratorioides (African Migratory Locust)*
LPA	*Locustana pardalina*
MoAFSC	*Ministry of Agriculture, Food Security and Cooperatives*
MoARD	*Ministry of Agriculture and Rural Development*
NCDLC	*National Desert Locust Control, Libya*
NOAA (US)	*National Oceanic and Aeronautic Administration*
NSD	*Republic of North Sudan*
NSE	*Nomadacris septemfasciata*
OFDA	*Office of U.S. Foreign Disaster Assistance*
PHD	*Plant Health Directorate*
PHS	*Plant Health Services, MoA Tanzania*
PPD	*Plant Protection Department*
PPSD	*Plant Protection Services Division/Department*
PRRSN	*Pesticide Risk Reduction through Stewardship Network*
QU	*Quelea bird*
SARCOF	*Southern Africa Region Climate Outlook Forum*
SGR	*Schistoseca gregaria*
SWAC	*South West Asia DL Commission*
TAG	*Technical Assistance Group*
Triangulation	*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.*
USAID	*the Unites States Agency for*

	International Development
UN	*the United Nations*
ZEL	*Zonocerus elegans, the elegant grasshopper*
ZVA	*Zonocerus variegatus, the variegated grasshopper (This insect is emerging as a fairly new distractive dry season pest, largely due to the destruction of its natural habitat through deforestation, land clearing, for agricultural and other development efforts and from 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

To learn more about our activities and programs, please, visit us at:

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