

**Emergency Transboundary Outbreak
Pest (ETOP) Situation Report for April
with a Forecast till
Mid-June, 2014**

Summary

The Desert Locust (SGR¹) situation remained calm along the Red Sea coasts during April.

Several swarms migrated from northwestern **Somalia** to eastern **Ethiopia** where aerial and ground control treated 2,585 ha from 8-30 April. An unconfirmed report of hoppers in Aysha, eastern **Ethiopia** suggested breeding has begun in those areas (DLCO-EA).

In **Sudan**, locusts were controlled on 3,620 ha by ground means during the 1st fortnight of April. In **Yemen**, the situation remained calm along the Red Sea coast and Gulf of Aden and only a few numbers of solitary adults were reported East and South of Hodeida, near Midi and northwest of Aden during this month. Adult locust moved from the Red Sea coasts of **Saudi Arabia** to the interior of the country and control operations treated close to 20,000 ha during April. Small-scale breeding is in progress in northern **Oman** and southeast **Iran** where hopper groups were controlled on 730 ha total during April. The situation remained relatively calm in spring breeding areas in northwest Africa and no locusts were reported in Sahel West Africa (CNLA/Chad, CNLA/Mauritania,

CNLA/Tunisia, CNLA/Morocco, DLCO-EA², DLMCC/Yemen, DPPQS/India, FAO-DLIS, LCC/Oman, NCLC/Libya, PPD/Sudan).



A locust swarm descending on a maize field in Jijjiga, eastern Ethiopia, Zana, 04/2014)

Forecast: The SGR situation will remain relatively calm in northwest Africa, Sahel West Africa and central Africa during the forecast period. Hopper bands and groups will appear in eastern **Ethiopia** and increase locust numbers in the coming months. The Red Sea region will experience calmness and only limited scale-breeding is likely in the interior of **Saudi Arabia** and **Yemen**. Southeast **Iran** and western **Pakistan** will experience small-scale breeding in areas of recent rainfall (CNLA/Chad, CNLA/Mali, CNLA/Mauritania, CNLA/Morocco, CNLA/Tunisia, DLCO-EA, DLMCC/Yemen, DPPQS/India, FAO-DLIS, LCC/Oman, NCLC/Libya, PPD/Sudan).

OTHER ETOPS

Red (Nomadic) Locust (NSE): NSE situation remained serious in **Malawi** where 8,000 ha (20,000 acres) were been detected during joint aerials

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

² DLCO-EA member-countries = Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, South Sudan, Tanzania, Uganda,

surveys. A similar situation is expected in **Tanzania** and **Mozambique** where favorable breeding conditions persisted fledged and swarms have started developing in Ikuu-Katavi, Wembere, Malagarasi Basin and Rukwa Valleys in Tanzania as well as in Buzi-Gorongosa and Dimba plains in Mozambique and Kafue Flats in Zambia.

Forecast: Adults will concentrate and form swarms. If left uncontrolled, the swarms will begin migrating to neighboring areas. The International Red Locust Control Organizations for Central and Southern Africa (IRLCO-CSA) has appealed to member-states and development partners for resources to launch timely survey and control operations and abate potential damage to crops and pasture (IRLCO-CSA).

Madagascar Migratory Locust (LMC): Large numbers of hoppers have fledged and formed adult populations. Some 20 million ha were reported surveyed and more than 400,000 ha have been treated or protected. In February alone, more than 160,000 ha were treated. The current infestation areas stretch 100 km from south-west of Mahajanga to the southern part of the Mahafaly Plateau (south of Toliara) (DPV-FAO, FAO-ECLO).

Forecast: As the rainy season comes to an end and the wind patterns change, and the coastal areas progressively dry out, 2nd generation swarms continue moving to the interior of the country. *Aggressive surveillance, monitoring and timely preventive interventions remain imperative to avert any major crop damage in the coming months* (DPV-FAO, OFDA/AELGA).

Moroccan (DMA), Italian (CIT), Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): No locust reports were received in CAC in April. Locusts may have begun developing in some regions (OFDA/AELGA).

Forecast: Locusts are expected to begin developing in some areas in the CAC during the forecast period (FAO-ECLO, OFDA/AELGA).

African Armyworm (AAW): The AAW outbreak season continued in northern **Tanzania** where caterpillars were observed in maize fields during the 1st dekad of April. The pest was also reported in **Kenya**. Positive trap catches were reported in southern **Ethiopia** (PHS/Tanzania).



Young maize plant damaged by armyworm caterpillars, Arusha, Tanzania, 3/2014)

Forecast: AAW activities will continue in the northern frontier in **Kenya**, Northern **Tanzania** and perhaps southern **Ethiopia** during the forecast period. The AAW season has ended in Malawi, Mozambique, Zambia and Zimbabwe and significant developments are not expected in these countries during the forecast

period (IRLCO-CSA, DLCO-EA, OFDA/AELGA, PHS/Tanzania).

Quelea (QQU): QQU bird outbreaks were reported in Dodoma, Tabora and Shinyanga Regions of Tanzania and surveys to locate more roosts are launched by the MoA's Plant Health Services. No reports of QQU birds were received from other frontline countries in eastern and southern Africa (DLCO-EA, IRLCO-CSA, OFDA/AELGA).

Forecast: QQU birds will likely remain a problem to small grain cereal growers in the Rift Valley, Eastern and Nyanza Provinces of Kenya, Kilimanjaro, Morogoro, Dodoma, Singinda and Shinyanga regions of Tanzania and in provinces of Zimbabwe where winter wheat is grown (IRLCO-CSA).

OFDA/TAG's Pest and Pesticide Monitoring, Reporting and Response unit (Assistance for Emergency Pest [Locust/Grasshopper] Abatement) will continue monitoring ETOP situations closely and issue alerts and monthly updates and advise as necessary. End summary

Progresses made in SGR Frontline Countries:

SGR frontline countries (FCs) in Sahel West Africa, namely **Chad, Mali, Mauritania**, and **Niger** have established autonomous national locust control units (CNLA) responsible for all SGR activities.

With the support they received from external sources, including USAID/OFDA and their own resources, FCs are often able to launch preventive interventions and minimize and avoid the threats the SGR poses to food security and livelihoods of

vulnerable communities. Preventive interventions that Mauritania launched from October 2013 through January 2014, with its own resources, and abated threatening locust invasions is a good example of a success story.

*CNLAs' continued efforts to prevent, mitigate, avert and/or respond to potentially devastating SGR outbreaks and invasions are good examples of **disaster risk reduction** that deserve encouragements and support.*

OFDA ETOP Activities and Impacts

- Contributions from OFDA and other donors enabled FAO to establish Pesticide Stock Management System (PSMS) in 50 countries around the globe. As a result, participating countries can now conduct regular inventories and make informed decisions to prevent unnecessary accumulations of obsolete stocks, 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 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. Activities are being coordinated by the DLCO-EA in collaboration with partners in Ethiopia, Kenya and Tanzania. Among partners' latest achievements is a successful launching of a mobile based information

collection and transmission by local farmers. OFDA/TAG intends to expand this innovative technology to other armyworm affected districts and countries.

- OFDA continues its assistance to sustainable pesticide risk reduction initiatives through stewardship network (SPRRSN) programs by strengthening 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 boiler plate for future initiatives. OFDA is considering expanding the SPRRSN initiatives to North Africa, West Africa, the Middle East, CAC and other regions.

- OFDA continued its support for capacity strengthening as part of its DRR programs through a cooperative agreement with FAO. This program assists countries to mitigate, prevent, and respond to ETOP outbreaks and reduce such emergencies. It also helps avoid misuse and mishandling of pesticides, pesticide-incorporated materials and application platforms.

- OFDA DRR program aimed to 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 to better coordinate locust monitoring and reporting as well as launch joint plans for survey and prevention to minimize ETOP

threats to food security and livelihoods of vulnerable populations.

Note: All ETOP SITREPs, including the current one can be accessed on our websites:

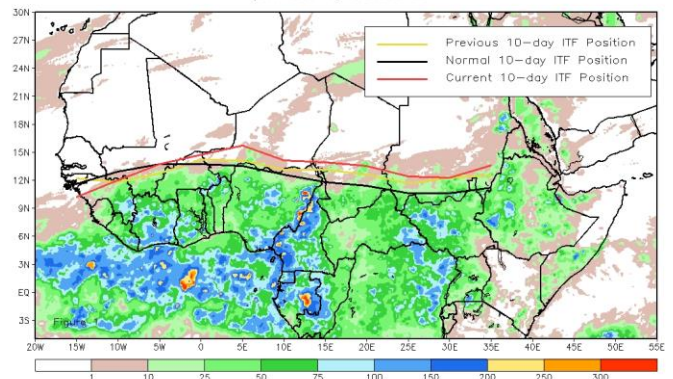
<http://www.usaid.gov/what-we-do/working-crises-and-conflict/responding-times-crisis/how-we-do-it/humanitarian-sectors/agriculture-and-food-security/pest-and-pesticide-monitoring>

Detailed accounts of weather and ETOP situation as well as an ETOP forecast for the next six weeks are discussed hereafter.

Weather and ecological conditions

During the third dekad of April, the Inter-Tropical Front (ITF) moved slightly to the North relative to its position during the previous period, but because of the strong, dry northerly winds, the northward movement of the Front was decreased.

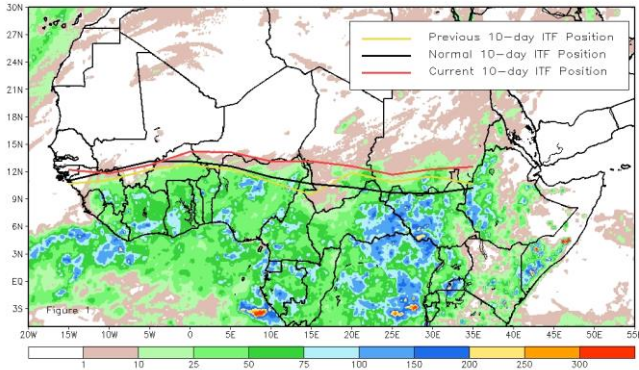
Current vs. Normal Dekadal ITF Position and RFE Accumulated Precipitation (mm)
April 2014, Dekad 3



The mean western position of the front (10W-10E) was located along 14N causing above-average rainfall along the Gulf of Guinea, including eastern Guinea Conakry and Ivory Coast. The mean eastern (20E-35E) portion of the ITF continued its northward movement and was approximated at 12.9N leading the average position by 2 degrees and caused

moisture increase along the Sudan-South Sudan border and parts of western South Sudan (NOAA, see map below). From April 11-20, 2014, the ITF was progressively migrating northward. The eastern portion of the ITF (20E-35E) approximated 12.3N, 2.4 degrees higher than the mean for this time of year.

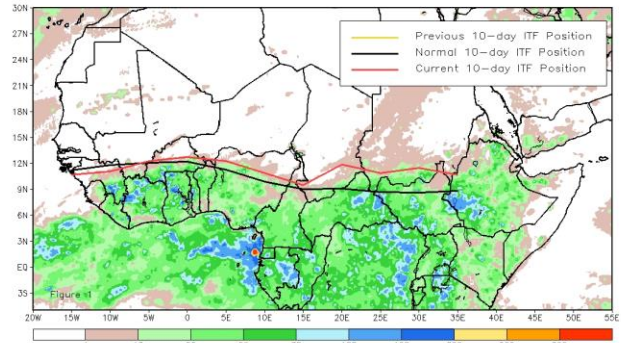
Current vs. Normal Dekadal ITF Position and RFE Accumulated Precipitation (mm) April 2014, Dekad 2



This caused above-average rainfall (>50 mm) across eastern CAR and much of South Sudan. The western portion (10W-10E) of the ITF was located along 13.2N, about 0.7 degree N of the mean position. Enhanced, moist southerly wind caused the higher than average precipitation in Liberia, Cote d'Ivoire, and Ghana during this period (see map below, NOAA).

During the first dekad of April, ITF showed significantly northward migration and caused above-average rains across portions of the gulf of Guinea and Eastern Africa. The mean western (10W-10E) portion of the ITF was positioned along 11.9N, which is 0.4 degree north of the average position for this time of year. The strong southerly flow brought wetter than average conditions throughout eastern Guinea, Cote d'Ivoire, Ghana, Togo, and Benin. The ITF's mean eastern (20E-35E) portion was approximated at 11.2N; 2.4 degrees north of its average mean position, bringing surplus rain over southern Sudan, South Sudan, and southwestern Ethiopia during the period.

Current vs. Normal Dekadal ITF Position and RFE Accumulated Precipitation (mm) April 2014, Dekad 1



The above rainfall map displays the current ITF position relative to its long-term average position during the first dekad of April (NOAA, 4/2014).

Light to medium-high rainfall were reported along the **Ethio-Djibouti** and **Ethio-Somali** borders during April. These areas are also where locust activities intensified. Arid areas around Dire Dawa, eastern **Ethiopia** also received enough rainfall during the month to create suitable conditions for locusts to survive and breed. Moderate to heavy rain was recorded on April 5 in summer breeding areas in Hadramout, Shabwa and Marib Provinces in **Yemen**. Rainfall was also reported in these areas on 29, 30, 31 March and April 1. This will likely cause ecological conditions to improve and allow breeding (DLCO-EA, DLMCC/Yemen). Ecological conditions are favorable in a few locations for the survival and reproduction of locusts in the Ziz-Ghris valley and the southeastern slopes in **Morocco** (CNLAA/Morocco).

In the **NSE** outbreak areas, heavy rainfall was recorded in Mozambique and Tanzania: 176 in Mafambisse (Buzi-Gorongosa), 180 mm in Buzi (Buzi-Gorongosa) and 159 mm in Caia (Dimba) Mozambique and 49.7 mm in Masenge (Wembere), 137 mm in Kaliua (Malagarasi), 83.2 mm in Mpanda (Ikuu-Katavi), and 88.8 mm in Muze (Rukwa plains) in Tanzania (IRLCO-CSA).

No update was received from **CAC** at the time this report was compiled, but ecological conditions are expected to have begun improving gradually for locust activities to commence (OFDA/AELGA).

In **Madagascar** a late received update reported optimum rainfall throughout areas stretching a 200 km diagonal wide from Belosur-Tsiribihina to Vangaindrano in March. The rest of the country received below optimum moisture requirement for the LMC, i.e., 1.7 mm in Betroka (AMI-C) and 4.0 mm in Tranomaro (ATM-S), but surplus (45 mm) in Amboahangy (ATM-S). The soil moisture level was still high and vegetation remained green in areas that received heavy rainfall in previous months (DPV-FAO).

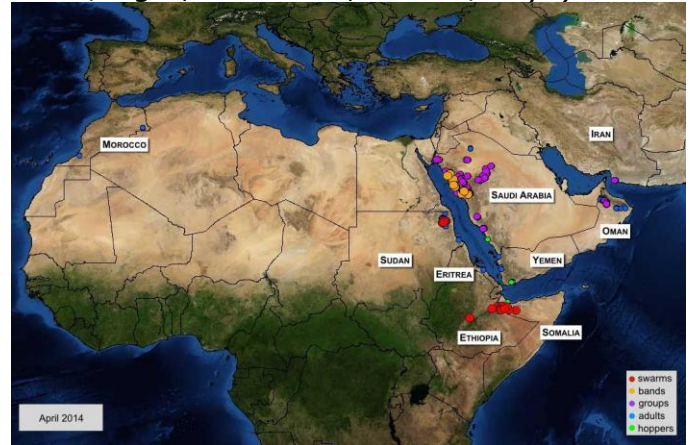
Note: *Changes in the weather patterns contribute to ecological shift in ETOP habitats and can increase the risk of pest outbreaks, resurgence and even emergence of new pests.*

Case: Moroccan locust in Uzbekistan has shown a considerable vertical habitat expansion by up to 1,000 feet or 300 meters from its normal development 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. Regular monitoring and timely reporting of anomalous manifestations in pest habitats and behavior remain essential. **End note.**

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

SGR - Western Outbreak Region: The SGR situation remained calm in winter breeding areas in the western outbreak region during April. Only a few isolated solitary adults were observed in Southeastern Ghrib in Ziz Valley,

northeast of Bouarfa in the Figuig Province and the city of Central Guelmim in southern **Morocco**. No locusts were reported in **Mauritania, Mali, Niger, Chad, Algeria or, Tunisia** during this month (CNLA/Chad, CNLA/Mali, CNLA/Mauritania, CNLAA/Morocco, CNLA/Niger, FAO-DLIS, NCDLC/Libya).



SGR situation in winter and spring breeding areas during April, 2014, FAO-DLIS

Forecast: The locust situation will likely remain calm and significant developments are unlikely without precipitation in spring breeding areas in northwest Africa in Mauritania, Morocco, Tunisia, Algeria, and Libya during the forecast period. Sahel West Africa, i.e., Mali, Niger, Chad, Niger and Senegal, Burkina Faso and Guinea will also remain calm during this period (CNLA/Chad, CNLA/Mali, CNLA/Mauritania, CNLAA/Morocco, CNLA/Niger, FAO-DLIS, NCDLC/Libya).

SGR (Desert Locust) - Central Outbreak Region:

In April, several highly mobile immature SGR swarms migrated from northwestern Somalia and reached eastern Ethiopia. Aerial and ground control operations were launched from 8-30 April by the Desert Locust Control Organization for Eastern Africa and the Ministry of Agriculture, respectively, and controlled immature and mature swarms in 2,370 ha. Swarms were detected in several locations, in Shadet and Gebere Jiri in Awbere District, in Chirimit in Dire Dawa Administration and in Garba Annano, Kalabed and Ruchis. Ground operations controlled swarms in 180 ha

in Muluale, Gobieyer and Gedeb from 8-10 April. Attempts were made on April 6th and 7th to control swarms in Awbere District in Jijiga near northwestern **Somalia** border and on April 9th and 14th in Lega Bira and Banke near Dire Dawa, but failed because the swarms were highly mobile and escaped into rugged mountainous terrains. Survey and control operations are in progress (DLCO-EA).



Maize plants destroyed by locust in Jijiga, eastern Ethiopia, April 2014, Zana

Swarms were reported damaging young maize plants in Jijiga (see picture above) in eastern **Ethiopia** during April. Several immature, maturing and mature swarms were treated in many locations during April, i.e., Shadet, Gebere Jiri in Awbere District, Chirimit in Dire Dawa Administration. Earlier, swarms were reported appearing from Aysha bordering **Djibouti** to Degehabur southeast of Jijiga in eastern **Ethiopia** during the 6th through the 10th of April. Most of the swarms are highly mobile and difficult to target for control.



ADLCO-EA spray play controlling locust swarms in Jijiga, eastern Ethiopia, Zana, April, 2014)



SGR swarm basking in morning sun in eastern Ethiopia (DLCO-EA, April, 2014)

In **Sudan**, ground control operations treated immature swarms and adult groups on 3,620 ha in Wadi oko, Wadi Dayet and near Wadi Aldaiib during the 1st fortnight of April. A few individual locusts were also detected in Toker Delta, but did not require treatment. The situation remained calm and control operations have stopped in **Eritrea** where 105 ha were reported treated during April (FAO-DLIS, PPD/Sudan).

In **Yemen**, the situation remained calm along the Red Sea coast and Gulf of Aden. Only very few solitary adults were reported in East and South of Hodeida, near Midi and Am Rija northwest of Aden during this month. As ecological conditions continued becoming unfavorable, adult locusts moved from the Red Sea coasts of **Saudi Arabia** to the interior of the country where small-scale breeding will occur during the forecast period. Control operations treated 19,994 ha in **Saudi Arabia** during this month. Small-scale breeding is in progress in northern **Oman** and hopper groups are forming where control operations treated 130 ha during April (DLCO-EA, DLMCC/Yemen, FAO-DLIS, LCC/Oman).

Forecast: Hopper groups and bands will form in eastern **Ethiopia** and perhaps in northwestern **Somalia** as well. Small scale breeding is likely in the interior **Saudi Arabia** and **Yemen** as well as **Oman** during the forecast period, but significant developments

are not expected (DLCO-EA, DLMCC/Yemen, FAO-DLIS, PPD/Oman, PPD/Sudan).

Vigilance and active monitoring, reporting and preventive interventions remain essential to abate locust migration to neighboring countries (CRC, DLCO-EA, DLMCC/Yemen, FAO-DLIS, LCC/Oman, PPD/Sudan).

SGR - Eastern Outbreak Region: Small-scale breeding occurred in Qaleganj, Kerman Province in southeastern **Iran** where limited scale control treated 600 ha during April. Locusts were not observed in adjacent areas in southwestern **Pakistan** or **India** during this period (DPPQS/India, FAO-DLIS).

Forecast: Hoppers will begin appearing in southeastern **Iran** and small-scale breeding may commence in areas of recent rainfall in southwestern **Pakistan** and cause locust numbers to increase slightly during the forecast period, but significant developments are not expected (DPPQS/India, FAO-DLIS)

Red (Nomadic) Locust (NSE): Large numbers of NSE swarms and concentrations (50,000 to 300,000 locusts/ha) were detected on 8,000 ha and 1,240 ha were treated in Lake Chilwa plains in **Malawi** during joint aerial surveys carried out by IRLCO-CSA and MoA. Financial assistance was provided by the UN/FAO. A fungal-based safer biological pesticide - GreenMuscle was employed. However, the locust threat continues given that large areas were left untreated due to lack of pesticides.

In **Tanzania** MoA carried out ground surveys in parts of Ikuu outbreak areas accessible by ground means revealed locust concentrations and swarms, suggesting that locusts have fledged and started forming swarms in Ikuu-Katavi, Wembere, Malagarasi Basin and Rukwa Valleys in Tanzania. A similar situation is expected to prevail in Buzi-Gorongosa and Dimba plains in Mozambique and Kafue Flats in Zambia.

Forecast: Swarms from **Malawi** and **Tanzania** will likely invade adjacent areas and migrate further into neighboring countries, i.e., Rwanda, Uganda, Democratic Republic of Congo, Burundi, Kenya, Zimbabwe and Botswana and pose a threat to food security in the region. In light of the increasing swarm sightings and the possibility of the swarms invading neighboring rice paddy fields, it was decided to use Chlorpyrifos 240 ULV to be made available during the second week of May and help resume control operations. IRLCO-CSA has issued an alert and appealed to its member-states (IRLCO-CSA³) and development partners to avail resources to maintain aggressive and timely survey, monitoring and coordinated control operations in Tanzania (Ikuu-Katavi, Malagarasi Basin, Wembere and Rukwa Valley), Mozambique (Buzi-Gorongosa and Dimba plains) and Zambia (Kafue Flats).to avert any serious damage the pest could cause to crops and pasture and impact food security in the affected regions down the line.

Madagascar Migratory Locust (LMC)
Large numbers of hoppers have fledged and formed adult populations. A late received report indicated that as of March 20, some 20 million ha were reported surveyed and more than 400,000 ha have been treated or protected. Current infestation areas stretch 100 km from south-west of Mahajanga to the southern part of the Mahafaly Plateau. Aerial and ground survey and control operations are in progress (DPV-FAO, FAO-ECLO).

³ IRLCO-CSA member-countries = Botswana, Kenya, Malawi, Mozambique, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe

Forecast: As the rainy season has tapered off, the coastal areas are progressively drying out and the wind patterns have changed from south to east and northeast and the 2nd generation swarms will continue migrating towards the interior of the country where they will concentrate and become a problem.

Survey and control: As of now, more than 20 million ha have been surveyed and in the upwards of 400,000 ha treated or protected since aerial operations began in late September, 2013.

Resources: So far \$26.2 million has been contributed by GoM (through a Work Bank loan), Austria, Belgium, CERF-OCHA, European Union, France, Italy, Norway, and USA to the \$43.9 million appeal for the three year project. This does not include hundreds of thousands of liters of pesticide donated by non-traditional donors Morocco, Mauritania, Algeria... estimated at millions of dollars.

Three helicopters have been deployed along the central, mid and north western parts of the country to canvas large areas of invasion. A fixed-wing spray aircraft was dispatched on March 1st to Tsiroanomandidy (in the Middle-West) to cover remote areas inaccessible by helicopters. Aerial deployment is closely monitored by the FAO-DPV team and adjusted according to locust phenology and migration. Vehicles and equipment for camping, survey and personal protective equipment, etc. are being delivered. Key technical specialists, Campaign Coordinator, two Junior Locust Experts, one Junior Logistician, a Security Expert, a Geographical Information Systems Expert, two Aircraft Logistics Experts, a Bio-pesticide expert and an Environmental analyst are on site to organize field activities and train national staff. [Human Health and Environmental Management Plan](#) is being implemented in close collaboration with the National Anti-Locust Centre, the Plant

Protection Directorate of the Ministry of Agriculture and the National Coordination Unit, and national specialized expertise has been mobilized.

Pesticides: As of March 20th, 353 858 l of Chlorpyrifos 240 ULV; 134 450 l of Teflubenzuron 50 UL and 680 kg of Green Muscle were reported available. It is worth noting that 260,000 l of pesticides were received as GIK by GoM from Algeria (30,000 l, will arrive soon), Mauritania (30,000 l) and Morocco (200,000 l). Donations from Morocco and Mauritania have been delivered. The stock pledged by Algeria was expected to arrive by mid-April 2014 (DPV-FAO).

For further detail, please, visit the following web:

<http://www.fao.org/emergencies/resources/documents/resources-detail/en/c/224857/>

Forecast: As the rainy season progressively comes to an end and the wind pattern is changing, the coastal areas will progressively dry out. As a result, swarms from the second generation will continue migrating towards the interior of the country.

Aggressive surveillance, monitoring and timely preventive interventions remain imperative to avert any major crop damage in the coming months, all the more so in the West Central Invasion areas, North Central multiplication and Concentration areas (DPV-FAO, OFDA/AELGA).

Moroccan (DMA), Italian (CIT), Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): No locusts were reported in CAC during April, but some locust activities are expected to have commenced in the region (OFDA/AELGA).

Forecast: Locust activities are expected to continue appearing in CAC during the forecast period (FAO-ECLO, OFDA/AELGA).



(Locust prone CAC countries, FAO)

Timor and South Pacific: No update was received from East Timor in April (OFDA/AELGA).

African Armyworm (AAW): AAW outbreaks occurred in Kilifi, Taita Taveta and Kwale Counties in **Kenya** as well as in Arusha, Mtwara and Mbeya regions in **Tanzania** (IRLCO-CSA, PHS/Tanzania).

Forecast: AAW situation will likely remain clam in Malawi, Mozambique, Zambia and Zimbabwe and outbreaks will continue in northern **Tanzania** and **Kenya** and perhaps begin appearing in southern **Ethiopia** towards the end of the forecast period (IRLCO-CSA, DLCO-EA, OFDA/AELGA, PHS/Tanzania).

Quelea (QQU): QQU bird outbreaks were reported from Kilimanjalo and Shinyanga regions in **Tanzania** and in Makueni County in **Kenya**. QQU populations were reported in Chokwe district in Gaza province in **Mozambique** (DLCO-EA, IRLCO-CSA).

Forecast: QQU birds will likely continue being a problem to small grain cereals in **Kenya** and **Tanzania** and **Zimbabwe** (IRLCO-CSA).



QQU roosts in Kitui, Kenya in February (Courtesy: Daily Nation Kenya, March, 2014)

Facts: **QQU** birds can travel ~100 km/day looking for food. An adult QQU bird can consume 3-5 g of grain and perhaps destroy the same amount each day. A 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 for a day.

Rodents: No rodent outbreaks reports were received during April. 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 and as often as available. Lead farmers and community forecasters are encouraged to remain vigilance and report any ETOP sightings to concerned authorities immediately.

Inventories of National Stocks of Acridid Pesticides

Pesticide inventory showed a minor change in April as few countries were engaged in limited control operations: Ethiopia (2,585 ha). Eritrea

(105 ha) Sudan (3,620 ha), Oman (130 ha), Iran (600 ha), Yemen (0), Saudi Arabia (19,994 ha), No changes were reported in other countries during the reporting month.

Note: Some of the inventories shown below are not necessarily current, as many countries tend to their inventories after activities are concluded and/or use acridid pesticides for controlling other agricultural pests. **End note.**

Mindful of the risk of pesticides becoming obsolete passed their use of life and posing serious health and environmental threats and become considerable financial burdens, ETOP countries with large inventories and less likely to use them within a reasonable time period, are encouraged to test their stocks regularly and determine whether they should use, retain, share or safely discard them.

With the support from USAID/OFDA, Japan, the Netherlands and other donors, FAO has been able to install a web-based tracking system – Pesticide Stock Management System (PSMS) - in more than 50 countries around the globe. The System has enabled dozens of countries to identify stocks that require testing, or put to an immediate use, or shared or promptly disposed.

OFDA/AELGA encourages countries to continue exploring options that are proven safe and effective in preventing the risks pesticide stockpiling could pose to vulnerable populations and communities, their shared environment and assets as well as beneficial organisms and to minimize and ultimately avoid financial burdens associated with disposal of obsolete pesticide stocks. It promotes IPM at all times. A judiciously executed triangulation of usable stocks from countries with large inventories to where they are much needed is a win-win situation worth considering.

Note: *The core message of sustainable Pesticide Stewardship Program is to strengthen the national and regional pesticide delivery systems by linking partners at different levels to*

*help reduce pesticide related health risks as well as minimize and prevent environmental pollution, and thereby improve food security and ultimately contribute to the national and regional economy. **End note.***

Estimated Quantities of pesticides available for ETOP operations in frontline countries as of November, 2013

Country	Quantities l/kg [§]
Algeria	1,190,000~ ^D
Chad	43,400
Eritrea	-9,885~
Egypt	Data not available
Ethiopia	1,200~
Libya	25,000
Madagascar	176,580~
Mali	32,000 ^D
Mauritania	49,000 ^D
Morocco	3,757,000~ ^D
Niger	42,805~
Oman	19,400
Senegal	156,000~ ^D
Saudi Arabia	Data not available
Sudan	774,000~
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 2013; GM = *GreenMuscle*TM (fungal-based biological pesticide); @includes donations from Saudi Arabia

LIST OF ACRONYMS

AAW African armyworm (*Spodoptera expempta* - SEX)

AELGA	Assistance for Emergency Locust Grasshopper Abatement		mature adults, but lacks fully developed reproductive organs and hence cannot breed
AFCS	Armyworm Forecasting and Control Services, Tanzania	GM	Green Muscle (a fungal-based biopesticide)
AfDB	African Development Bank	ha	hectare (= 10,000 sq. meters, about 2.471 acres)
AME	Anacridium melanorhodon		
APLC	Australian Plague Locust Commission		Integrated Regional Information Networks
APLC	Australian Plague Locust Commission	IRLCO-CSA	International Red Locust Control Organization for Central and Southern Africa
CAC	Central Asia and the Caucasus		
CBAMFEW	Community-based armyworm monitoring, forecasting and early warning	ITCZ	Inter-Tropical Convergence Zone
		ITF	Inter-Tropical Convergence Front = ITCZ)
CERF	Central Emergency Response Fund	FAO-DLIS	Food and Agriculture Organizations' Desert Locust Information Service
CIT	Calliptamus italicus		young, wingless
CLCPRO	Commission de Lutte Contre le Criquet Pèlerin dans la Région Occidentale (Commission for the Desert Locust Control in the Western Region)	Hoppers	locusts/grasshoppers (Latin synonym = nymphs or larvae)
		Hopper bands	groups of hoppers aggregated and marching in unison and pretty much in the same direction
CNLA/CNLAA	Centre National de Lutte Antiacridienne (National Locust Control Center)		
CRC	Commission for Controlling Desert Locust in the Central Region	Kg	Kilogram (~2.2 pound)
		L	Liter (1.057 Quarts or 0.264 gallon or 33.814 US fluid ounces)
CTE	Chortoicetes terminifera		
DDLC	Department of Desert Locust Control	LMC	Locusta migratoriacapito
		LMM	Locusta migratoria migratorioides (African Migratory Locust)
DLCO-EA	Desert Locust Control Organization for Eastern Africa	LPA	Locustana pardalina
DMA	Dociostaurus maroccanus	MoAFSC	Ministry of Agriculture, Food Security and Cooperatives
DPPQS	Department of Plant Protection and Quarantine Services		
DPV	Département Protection des Végétaux (Department of Plant Protection)	MoARD	Ministry of Agriculture and Rural Development
		NCDLC	National Desert Locust Control, Libya
ELO	EMPRES Liaison Officers		
EMPRES	Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases	NOAA	National Oceanic and Aeronautic Administration
		NSD	Republic of North Sudan
ETOP	Emergency Transboundary Outbreak Pest	NSE	Nomadacris septemfasciata
		OFDA	Office of U.S. Foreign Disaster Assistance
Fledgling	immature adult locust /grasshopper that has pretty much the same phenology as	PHD	Plant Health Directorate

PHS	<i>Plant Health Services, MoA Tanzania</i>
PPD	<i>Plant Protection Department</i>
PPSD	<i>Plant Protection Services Division/Department</i>
PRRSN	<i>Pesticide Risk Reduction through Stewardship Network</i>
QQQU	<i>QQUelea QQUelea</i>
SARCOF	<i>Southern Africa Region Climate Outlook Forum</i>
SGR	<i>Schistoseca gregaria</i>
SWAC	<i>South West Asia DL Commission</i>
TAG	<i>Technical Assistance Group</i>
Triangulation	<i>The process whereby pesticides are donated by a country or countries, with large inventories with no immediate need, to a country or countries with dire need and a third party steps into the negotiation table and assists with shipments, etc. Usually FAO plays the third party role.</i>
USAID	<i>Unites States Agency for International Development</i>
UN	<i>the United Nations</i>
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, i.e. land clearing for agricultural and other development efforts.</i>

<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>

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