

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

Summary

The Desert Locust (**SGR**¹) situation remained calm during July. Control and drying of ecological conditions caused populations to decline in the interior of **Saudi Arabia**. Only a few adult groups and swarms moved southwest into the Asir Mountains in Saudi and northern **Yemen** during the month. A swarm that reached northern **Ethiopia** in June was controlled and another swarm that was reported wandering in the northern highlands later split and one reached southern **Eritrea**. The situation remained calm along the **Indo-Pakistan** borders and only a few scattered adults were reported in the summer breeding areas in **Pakistan**.

Forecast: Limited breeding is likely in areas of recent rainfall in Sahel West Africa, **Sudan, Eritrea, Yemen** as well as along the **Indo-Pakistan** borders and slightly increase locust numbers, but significant developments are not likely during the forecast period.

OTHER ETOPS

Red (Nomadic) Locust (NSE): NSE populations persisted in the primary outbreak areas in Tanzania, Malawi, Mozambique and Zambia. The situation was further exacerbated by extensive

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

vegetation burning (IRLCO-CSA).

Forecast: Due to extensive vegetation burning, swarms will further concentrate and begin moving out of the primary outbreak areas and perhaps reach cropping areas where they could cause serious damage. Active surveillance and preventive interventions remain essential to abate crop damage (IRLCO-CSA, OFDA/AELGA).

Madagascar Migratory Locust (LMC):

The first phase of the three year multi-million dollar locust campaign program is coming to an end. The campaign controlled and/or protected more than 1.2 million (close to 3 million acres) by June 2014, mostly by air (DPV-FAO).

Forecast: The locust situation will remain calmer than usual as breeding is not expected during the winter season (July to September). However, one aerial base will be maintained during the forecast period to ensure monitoring of the locust populations and carry out localized treatments if and when necessary (DPV-FAO).

Moroccan (DMA), Italian (CIT), Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): No update was received in July, but some locust activities may have persisted in parts of the region. DMA and CIT may have also begun egg laying in some countries in the Caucasus and Central Asia (OFDA/AELGA).

Tree locusts (*Anacridum* spp.): A Tree locust outbreak that was reported in previous months in Turkana County in **Kenya** was controlled by MoA and DLCO-

EA with assistance from FAO (IRLCO-CSA, DLCO-EA).

Tree locusts cause substantial damage to fodder and commercial trees such as acacias species that produce gum Arabic, a high value product in several industries.

African Armyworm (AAW): A small AAW outbreak was controlled in Tigray, northern **Ethiopia** in July and moth catches were reported in western and northern parts of the country (DLCO-EA, IRLCO-CSA).

Forecast: AAW activities may appear in northern **Ethiopia** and southern Eritrea during the forecast period. Vigilance and active monitoring remain essential (IRLCO-CSA, DLCO-EA, OFDA/AELGA, PHS/Tanzania).

Quelea (QQU): QQU bird outbreaks were reported in rice and sorghum crops in **Kenya**. More roosts were located in Siaya and Nakuru and control operations are underway. The birds were also reported damaging wheat in **Zimbabwe** where control operations were effected through ground operations (IRLCO-CSA).

Forecast: QQU birds will likely remain being a problem to small grain cereal growers. Active surveillance and timely reporting remain essential (IRLCO-CSA, OFDA/AELGA).

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

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

OFDA ETOP Activities and Impacts

- Contributions from OFDA and other donors enabled FAO to establish Pesticide Stock Management System (PSMS) in more than 50 countries around the globe. Thanks to the system, participating countries now can 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 (CBAMFEW) which was launched in FY 2013 is progressing well. The program aims at reducing the risk of armyworm threats to food security and livelihoods of rural communities and vulnerable populations.

OFDA Senior Technical Advisor for Pesticides and Pests and Manager (STAPPM) for the AELGA project recently visited several localities in Ethiopia where CBAMFEW activities are being implemented. The advisor was pleased with farmer forecasters' ability to carry out project activities on their own with minimal or no supervision from

agricultural staff. The three-year project is being managed by DLCO-EA and implemented in collaboration with national partners in Ethiopia, Kenya and Tanzania. The project has successfully launched a mobile based armyworm information collection and transmission by local farmers. This initiative is being introduced to Kenya and Tanzania and scaled up in Ethiopia. OFDA/TAG intends to expand this innovative technology to other armyworm affected countries and districts.

- OFDA continues its support for 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 STAPPM recently visited PSA-N activities in Ethiopia and noted progresses and constraints among the implementer and the beneficiaries.

- 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 as

well as helps 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 for coordinated monitoring, surveillance, reporting and to launch preventive interventions and minimize ETOP threats to food security and livelihoods.

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>

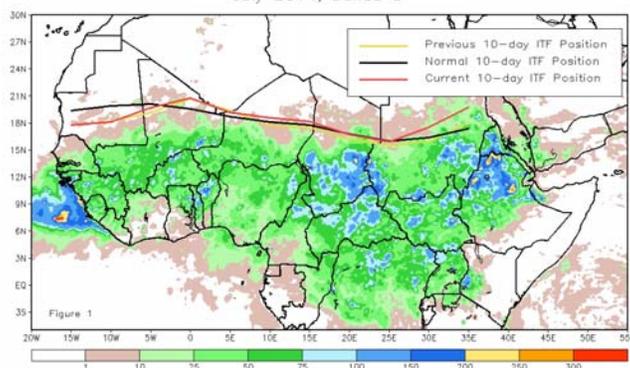
Detailed accounts of the weather, ETOP situation and forecast for the next six weeks are discussed hereafter.

Weather and ecological conditions:

During the 3rd dekad in July, the Inter-Tropical Front (ITF) continued moving northward across the Sahel. In the west (10W to 10E), the average position of the ITF was similar to its climatological mean position (19.3N), however the Front lagged in the far west (15W to 5W) over parts of Senegal, Mauritania, and Mali. This has caused below-average rainfall and unusually drier, northerly flow in the region. The mean eastern position of the ITF (20E to 35E) was approximated at 17.5N, which surpassed the climatological position by nearly 1 degree (16.6N) in late July. The Front persisted over parts of eastern Sudan, where it caused heavy rains

and lower-level surges of moisture (see map below, NOAA, July 2014).

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



Good rains were reported in the summer breeding areas in Sahel West Africa and light to heavy rains fell in the summer breeding areas in Sudan, parts of eastern and western Ethiopia, and the highlands in Eritrea during July. Monsoon rains were reported in the summer breeding areas along both sides of the Indo-Pakistan border (DLCO-EA, FAO-DLIS, LCC/Oman).

Dry and cool weather persisted and flooding receded in the NSE outbreak areas in Lake Chilwa in Malawi, Buzi-Gorongosa, Mozambique and Kafue flat in Zambia. Light rains were recorded in Buzi-Gorongosa and Dimba plains in Mozambique (IRLCO-CSA).

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. **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 A FORECASTS FOR THE NEXT SIX WEEKS

SGR - Western Outbreak Region: The SGR situation remained calm in June and July in spring and summer breeding areas in the western outbreak region (CNLA/Mauritania, CNLAA/Morocco, CNLA/Niger, FAO-DLIS, NCDLC/Libya).

Forecast: The situation will likely remain calm and only small-scale breeding may occur in areas of recent rainfall in **Mauritania, Mali, Niger** and **Chad** during the forecast period (CNLA/Chad, CNLA/Mali, CNLA/Mauritania, CNLAA/Morocco, FAO-DLIS, NCDLC/Libya).



SGR situation in July, FAO-DLIS

SGR (Desert Locust) - Central Outbreak Region: Infestations declined in the interior of **Saudi Arabia** due to dry conditions and active control operations (more than 2,180 ha were treated during July). A few small adult groups and swarms moved southwest into the Asir Mountains and small swarms and adult were reported in northwestern **Yemen** in June and July. Some swarms were reported in northern **Ethiopia** in July.

Locusts that developed in northwestern Somalia migrated to eastern Ethiopia, and later formed swarms and managed to reach Addis Ababa on May 14th, a phenomenon that has not been seen in

over half a century (see picture below).



A desert locust swarm over the city of Addis Ababa, Ethiopia, May 14, 2014, FAO-DLIS

The immature swarm that invaded the skies of Addis Ababa overnighted and headed west and northwest after basking in the morning sun in Addis for a few hours. The swarm was later detected in Tigray, a region known for locust invasions and a small splinter swamlet was reported in southern Eritrea where control operation treated 100 ha during July (DLCO-EA, DLMCC/Yemen, FAO-DLIS)FAO-DLIS).

Given the fact that the locust situation is of sub-regional to regional in nature and considering the non-existing capacity in northern Somalia to deal with any locust development and invasions, UN/FAO, DLCO, and MoA/Ethiopia have decided to develop a joint project to deal with the threat that the pest poses to the sub-region as a whole.

Forecast: Small-scale breeding may occur in the interior of **Yemen**, **Sudan** and in western **Eritrea**, but major developments are not expected during the forecast period (CDLCM/Yemen, DLCO-EA, FAO-DLIS).

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

Forecast: Small-scale breeding may occur and slightly increase locust numbers in areas of recent rainfall along the Indo-Pakistan border during the forecast period, but no major development is expected during this period (DPPQS/India, FAO-DLIS)

Red (Nomadic) Locust (NSE): With swarming populations present in outbreak areas in Tanzania, Malawi, Mozambique and Zambia the NSE situation continued to be serious during July. Locust concentrations may have persisted in Wembere and Malagarasi Basin in Tanzania; Buzi-Gorongosa and in Dimba plains in Mozambique and Kafue Flats in Zambia. Extensive vegetation burning further exacerbates locust populations to concentrate.

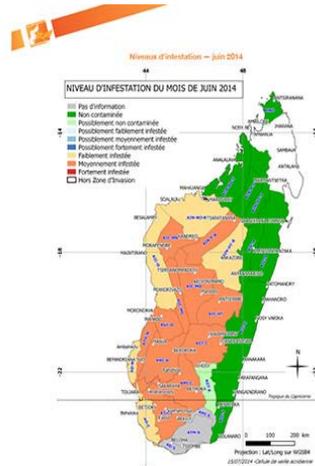
Forecast: With vegetation burning intensified, swarms will further concentrate and begin moving out of the outbreak areas into neighboring farmlands where they could cause serious damage to cultivated crops. It is critical that surveys, and control measures, are undertaken as necessary to avert seriously impact on food security in the region.

IRLCO-CSA has appealed to member-states (IRLCO-CSA²) and development partners to avail resource to help maintain aggressive and timely survey, monitoring and coordinated control operations in the primary outbreak areas and avert any serious damage the pest could cause to crops and pasture in the regions down the line.

Madagascar Migratory Locust (LMC): The first phase of the three year multi-million dollar locust campaign program that started in September 2013 is coming to an end. FAO implemented campaign activities and

² IRLCO-CSA member-countries = Botswana, Kenya, Malawi, Mozambique, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe

programs in close collaboration with the National Coordination Unit (NCU), the National Anti-locust Centre (CNL) and the Directorate of Plant Protection (DPV) and reported more than 1.2 million (close to 3 million acres) treated and/or protected by June 2014; 99% by air. In June alone, more than 54 swarms were detected and controlled.



The areas where the locusts were treated stretch from Mahafaly Plateau in the South to Soalala in the North.

Resources: The multi-year, multi-million dollar campaign is financed by the Government of Madagascar through a World Bank loan, Austria, Belgium, the European Union, France, Italy, Japan, Norway, the United Nations Central Emergencies Response Fund (CERF) and the United States of America. As of June 2014, the program had received USD 28.2 million in cash from the countries listed above and substantial quantities of pesticides as gift-in-kind from Morocco, Algeria, and Mauritania through triangulation. Based on the original appeal, more than USD 15 million will still be needed to effectively implement the three-year program (DPV-FAO)

Forecast: Locust breeding is not expected during the winter season from July to September and only some adult will persist and move around. Hence, an aerial base will be maintained during this period to ensure monitoring of the locust populations and carry

out localized treatments if and when necessary.

An evaluation mission of the first phase of the locust control campaign has come to an end and a comprehensive report is being awaited. A crop assessment was also in progress and expected to have been concluded by mid-July 2014 (DPV-FAO).

Moroccan (DMA), Italian (CIT), Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): No update was received in July, but some locust activities may have persisted in parts of the region. DMA and CIT may have begun mating and egg laying in some countries in the region (OFDA/AELGA).



(Locust prone CAC countries, FAO)

Forecast: Locusts will continue appearing in several places in CAC during the forecast period (FAO-ECLO, OFDA/AELGA).

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

African Armyworm (AAW): A small AAW outbreak was reported controlled in Tigray, northern **Ethiopia** in July and moth catches were reported in western and northern parts of the country. No AAW activities were reported elsewhere

during this month (DLCO-EA, IRLCO-CSA).

Forecast: AAW activities may appear in northern **Ethiopia** and southern **Eritrea** during the forecast period. Vigilance and active monitoring remain essential (IRLCO-CSA, DLCO-EA, OFDA/AELGA, PHS/Tanzania).

Quelea (QQU): QQU bird outbreaks were reported damaging rice and sorghum in Nyanza and Kisumu counties in **Kenya** respectively. More roosts were located in Siaya and Nakuru counties where control operations will be launched. QQU outbreaks were reported damaging wheat in Mashonaland Central and Mashonaland West provinces in Zimbabwe. Control was carried out using Fenthion applied from ground-based sprayers (DLCO-EA, IRLCO-CSA, OFDA/AELGA).

Forecast: QQU bird outbreaks will likely remain a problem to small grain cereal growers in **Kenya** and in areas of irrigated wheat in **Zimbabwe** wheat (DLCO-EA, IRLCO-CSA). Active surveillance and timely reporting are essential (OFDA/AELGA).

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 July. However, rodents remain a constant threat to cereal and other crops and produce 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 vigilant and report any ETOP sightings to concerned authorities immediately.

Inventories of National Stocks of Acridid Pesticides

Minimal control operations occurred in Eritrea (100 ha) and Saudi Arabia (2,180 ha) during July, and hence, pesticide inventory showed insignificant change (for more details see below table). **Note:** Some inventories shown below are not necessarily current, as many countries tend to issue update after activities are concluded and/or use acridid pesticides for controlling other pests. **End note.**

OFDA/AELGA encourages countries to continue exploring alternative options to prevent risks associated with pesticide stockpiling. OFDA promotes IPM as an alternative 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

Country	Quantities I/kg [§]
Algeria	1,190,000~ ^D
Chad	43,400
Eritrea	-9,985~
Ethiopia	-1,442~
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	773,214~
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 I, and 30,000 I of pesticides to Madagascar in 2013; Mali donated 21,000 I for NSE to Malawi, Mozambique and Tanzania in 2012 and FAO facilitated the triangulation Mauritania donated 25,000 and 30,000 I of pesticides to Libya in 2012 and Madagascar 2013; GM = *GreenMuscle*[™] (fungal-based biological pesticide); @includes donations from Saudi Arabia

APLC	Australian Plague Locust Commission
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CAC	Central Asia and the Caucasus
CBAMFEW	Community-based armyworm monitoring, forecasting and early warning
CERF	Central Emergency Response Fund
CIT	<i>Calliptamus italicus</i>
CLCPRO	Commission de Lutte Contre le Criquet Pèlerin dans la Région Occidentale (Commission for the Desert Locust Control in the Western Region)
CNLA/CNLAA	Centre National de Lutte Antiacridienne (National Locust Control Center)
CRC	Commission for Controlling Desert Locust in the Central Region
CTE	<i>Chortoicetes terminifera</i>
DDLC	Department of Desert Locust Control
DLCO-EA	Desert Locust Control Organization for Eastern Africa
DMA	<i>Dociostaurus maroccanus</i>
DPPOS	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 and hence cannot breed
GM	Green Muscle (a fungal-based biopesticide)

LIST OF ACRONYMS

AAW	African armyworm (<i>Spodoptera expempta</i> - SEX)
AELGA	Assistance for Emergency Locust Grasshopper Abatement
AFCS	Armyworm Forecasting and Control Services, Tanzania
AfDB	African Development Bank
AME	<i>Anacridium melanorhodon</i>

ha	hectare (= 10,000 sq. meters, about 2.471 acres)	SARCOF	Southern Africa Region Climate Outlook Forum
	Integrated Regional Information Networks	SGR	Schistoseca gregaria
IRLCO-CSA	International Red Locust Control Organization for Central and Southern Africa	SWAC	South West Asia DL Commission
ITCZ	Inter-Tropical Convergence Zone	TAG	Technical Assistance Group
ITF	Inter-Tropical Convergence Front = ITCZ)		Triangulation 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.
FAO-DLIS	Food and Agriculture Organizations' Desert Locust Information Service	USAID	Unites States Agency for International Development
Hoppers	young, wingless locusts/grasshoppers (Latin synonym = nymphs or larvae)	UN	the United Nations
Hopper bands	groups of hoppers aggregated and marching in unison and pretty much in the same direction	ZEL	Zonocerus elegans, the elegant grasshopper
Kg	Kilogram (~2.2 pound)	ZVA	Zonocerus variegatus, the variegated grasshopper; this insect is believed to be emerging as a fairly new distractive dry season pest, largely due to the clearing of its natural habitat through deforestation, i.e. land clearing for agricultural and other development efforts.
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	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		
QQQU	QQUelea QQUelea		

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