

**Emergency Transboundary  
Outbreak Pest (ETOP) Situation  
Report for March with a Forecast  
till mid-May, 2012**

## Summary

The Desert Locust (*SGR*<sup>1</sup>) situation continued developing in March in Libya and Algeria where gregarizing adults were seen laying eggs throughout the month. Ground teams treated more than 3,660 ha in Libya and nearly 1,500 ha in Algeria during this month. Surveys and control could not be extended to other outbreak areas in these countries as well as in northern Mali and Niger due to security problems and remoteness. Small-scale breeding may still be in progress in the Air Mountains in Niger and northern Mali, but it could not be confirmed. Very few adults were detected in southern coastal areas in Sudan near Eritrea border and in northern Oman during surveys carried out in March. The situation remained calm in other outbreak and invasion regions (DDLCO/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, and PPD/Sudan).

**Forecast:** Small-scale breeding will likely continue in southwestern Libya and southeastern Algeria where good rains were reported. Hatching will occur as the weather starts getting warmer in the coming weeks and locust numbers will increase and form hopper groups and small bands. Swarm formations will likely begin by late May in both

countries. Adult locust will likely move from northern Niger to southeastern Algeria and augment the existing breeding populations. Small-scale breeding will likely commence in the eastern coast of Oman and a similar situation may also occur in spring breeding areas in western coastal Pakistan and southeastern Iran during the forecast period provide rains fall, but significant activities are not expected. Other countries will likely remain calm during the forecast period (DDLCO/Libya, DLCO-EA, DPPQS/ India, FAO-DLIS, and PPD/Sudan).

OFDA will continue monitoring the situation closely and advise accordingly.

## Other ETOPs

**Red (Nomadic) Locust (NSE):** Swarms of NSE escaped from Ikuu-Katavi outbreak areas in Tanzania and dispersed westward. Swarm movements may have also occurred in Wembere and North Rukwa plains and Malagarasi Basin. Adult locusts were detected in Lake Chilwa/Lake Chiuta plains between Malawi and Mozambique and community-based monitoring teams reported low density populations in the Buzi-Gorongosa and Dimba plains in Mozambique. Survey operations were in progress in Kafue Flats and the Lukanga swamps in Zambia at the time this update was compiled (IRLCO-CSA).

**Forecast:** Hopper bands and swarms will continue forming in Tanzania, Malawi, Mozambique and Zambia.

IRLCO-CSA is mobilizing resources to carry out aerial survey and control in collaboration with the MoAs in member-countries and seeking assistance from development partners. All relevant MoA

<sup>1</sup> Descriptions of all acronyms can be found at the end of the report.

personnel in Tanzania and neighboring countries are advised to remain alert and report any locust sightings to IRLCO-CSA.

### **Madagascar Migratory Locust**

**(LMC):** The locust situation continued developing. Aerial interventions treated more than 2,500 ha from 14-18 March. FAO is negotiating to triangulate pesticides from West Africa to Madagascar (AELGA, FAO-CAN, FAO-ECLO).

**Note:** *On February 6, 2012, FAO-MoA held in Antananarivo and discussed the current locust situation and the forecast for the coming months. The team estimated the cost of the 2011-2012 locust campaign at USD 7.2 million. So far, cash and in-kind contributions and pledges from the UN/OCHA, IFAD, AfDB, EU, UNDP, France, and the Government of Madagascar are covering roughly half the estimated needs for the campaign. The next, FAO-MoA situation update meeting is scheduled for April 18, 2012. End note.*

**Moroccan (DMA), Italian (CIT) and Migratory (LMI) locusts in Central Asia and the Caucasus (CAC):** No update was received on the status of these pests in CAC at the time this report was compiled, but locusts will soon begin hatching as the temperature rises and conditions become favorable, however, significant developments are not expected in the coming weeks (AELGA).

**African Armyworm (AAW):** AAW outbreaks were not reported in March,

but positive trap catches were recorded in several regions in Tanzania during this month (DLCO-EA, IRLCO-CSA, and PHS/Tanzania).

**Forecast:** AAW activities will likely continue in Tanzania and perhaps commence in Kenya during the forecast period. Trap operators and community forecasters are encouraged to continue monitoring trap catches and report to relevant authorities and alert farmers promptly (AELGA, DLCO-EA, and IRLCO-CSA).

**Quelea (QQU):** QQU bird outbreaks were reported in March in Siaya district of Kenya, in Ghaza Province Mozambique, in Kilimanjaro, Singinda, Dodoma, and Shinyanga Regions of Tanzania and Mashonaland Central, Manicaland, Matebeleland South, and Masvingo Provinces of Zimbabwe (AELGA, DLCO-EA, IRLCO-CSA).

**Forecast:** QQU birds will likely become a problem to small grain crop growers in Kenya, Tanzania, Mozambique and Zimbabwe during the forecast period. Vigilance is recommended (AELGA, DLCO-EA, IRLCO-CSA).

**OFDA/AELGA (Assistance for Emergency Locust and Grasshopper Abatement) will continue closely monitoring ETOP situations in all regions and issue updates and advices as often as necessary. End summary**

### **Progress 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 DL activities.

Funds provided by the African Development Bank, USAID, the World Bank, France, FAO, host-governments, neighboring countries and others enabled the FCs to equip CNLAs with necessary tools, materials and infrastructure as well as help train staff to prevent and respond to SGR outbreaks and avoid the threats they pose to food security and livelihoods of vulnerable communities.

CNLAs' efforts to avert mitigate or respond to potentially devastating SGR outbreaks and invasions deserve support and encouragements – a good example of **sustainable disaster risk reduction** with modest input.

### OFDA ETOP Activities

- OFDA/TAG continues its initiatives in pesticide risk reduction through stewardship network (PRRSN) programs to ensure safety of vulnerable people and protect their assets and the shared environment against pesticide pollution. OFDA/TAG successfully launched two sub-regional PRRSNs in Eastern Africa and the Horn. The Horn of Africa PRRSN initiative has created a sub-set Association in Ethiopia (PSA-E).
- Discussions that began several months ago to launch similar PRR initiatives in North Africa and the Middle East were halted by the unrests that occurred in the regions. A dialogue is underway in other regions and will also resume soon in the regions mentioned above.
- OFDA continues its assistance in capacity strengthening to mitigate,

prevent, respond to and reduce risks of ETOP emergencies and associated human health threats as well as environmental pollutions from pesticides.

- OFDA is supporting a program to strengthen national and regional capacities in Central Asia and the Caucasus (CAC) through FAO to coordinate locust monitoring, reporting, prevention and mitigation efforts and abate the threats they pose to food security and livelihoods of vulnerable communities.

**All SITREPs can be accessed on our website at:**

[http://www.usaid.gov/our\\_work/humanitarian\\_assistance/disaster\\_assistance/locust/](http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/)

### Weather and ecological conditions

During the forth week there is an increased chance for above average rainfall over portions of Ethiopia, southern Tanzania, eastern Zambia, Malawi, northern Mozambique and northern Madagascar, while below average rainfall is expected over portions of Uganda, Kenya and northern Tanzania.

During the third week of March, Eastern and southern Tanzania continued to receive above-average rainfall, while moisture deficits prevailed over the rest of East Africa. Many places in southern Africa received below average rainfall. During the first dekad of March northern Namibia, local areas in South Africa, much of Tanzania, southern Uganda, northern Mozambique and portions of Madagascar received above average rainfall.

Normal to below normal rain was recorded at some locations near NSE outbreak areas. Late flooding occurred in the Lake Chilwa/Lake Chiuta plains in Malawi/ Mozambique and Buzi-Gorongosa in Mozambique, but it would have little effect on the locust populations as the

locust had fledged. Portions of Zambia, much of Botswana, Zimbabwe, South Africa, southern Malawi, central and southern Mozambique, portions of Madagascar, western Kenya and Ethiopia reported below average rainfall during the same period (DPPQS/India, FAO-DLIS, NOAA, IRLCO-CSA, PPD/Sudan).

**Note:** According to Southern Africa Region Climate Outlook Forum (SARCOF), south eastern continental SADC and the northern parts of Tanzania and Madagascar are expected to receive above-normal rainfall from January to March, 2012. The western flank of contiguous SADC is expected to receive below normal rainfall. October to March is the main rainfall season over most of southern Africa. Owing to the differences in the rainfall-bearing systems, the rainy season has been divided into two three-month periods, i.e. October to December and January to March. **End note**

**Note:** *Changes in weather patterns and the shift in the ecology of landscape are believed to exacerbate the risk of pest outbreaks and resurgence. Regular monitoring and reporting are essential.*

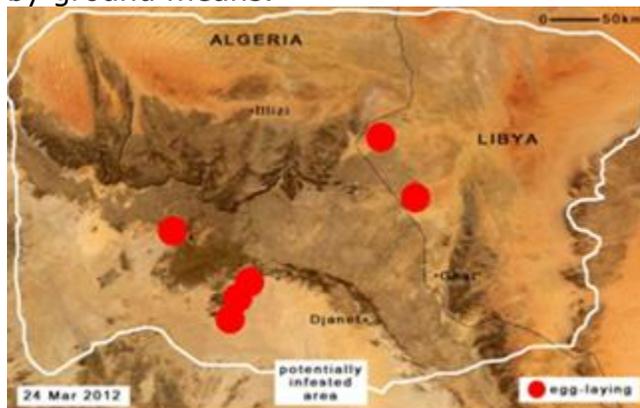
**End note.**

**Detailed accounts of ETOP situation, activities and ecological conditions are presented below.**

#### **SGR - Western Outbreak Region:**

The Desert Locust (SGR) situation remains potentially threatening along both sides of the Libya-Algeria border. Surveys and ground control interventions were launched by the national staff. In Libya groups of medium to high density mature gregarious adults have been seen copulating and laying eggs at nearly two dozen locations near the Algerian border north of Ghat throughout March (see map). The areas infested vary from less than 10 ha to almost 200 ha and groups. Control operations treated more than 3,665 ha in

southwest Libya near Ghat and close to 1,450 ha were sprayed in southeast Algeria near Djanet in March. More locusts may be present in other outbreak areas in these countries, but extensive survey and control are undermined by ongoing insecurity problem and lack of access by ground means.



(adult locusts seen laying eggs in Algeria and Libya, 4/2012, FAO-DLIS)

Small-scale breeding may still be in progress in the Air Mountains in Niger and northern Mali where survey operations have been difficult due to on going insecurity situation.

**Forecast:** As the weather gets warmer hatching will commence and locust numbers will increase and form hopper groups and bands in southwest Libya and southeast Algeria. Swarms could also form and likely migrate south into northern Niger and Mali during summer breeding. Adult locusts will likely move from northern Niger to southern Algeria and augment locust populations, but other areas in the region will likely remain clam during the forecast period (DDLCL/Libya, FAO-DLIS).

Efforts should be made to survey as many areas as possible and launch control operations before the end of May in order to reduce the threat of any migration to northern Mali and Niger at the beginning of the summer (AELGA, FAO-DLIS).

**SGR - Central Outbreak Region:** Low density scattered solitary adults were detected during surveys carried out in Tokar Delta and southern Red Sea coast in Sudan near Eritrea border

during March. Isolated immature adults were reported in northern interior of Oman. A similar situation may be present in Yemen where surveys were not conducted. No locusts were reported elsewhere in the region during February (DLCO-EA, FAO-DLIS, and PPD/Sudan).

**Forecast:** Small-scale breeding could occur in the eastern coast of Oman should rains fall during the forecast period, but significant developments are not expected. Other countries in the region will likely remain calm during the forecast period (DLCO-EA, FAO-DLIS)

**SGR - Eastern Outbreak Region:** The SRG situation remained calm in spring breeding areas in southeast Iran and southwest Pakistan despite the fact that conditions began improving. Only a few adults were detected on the west coast in Pakistan. No locusts were reported in India in March (DPPQS/India, FAO-DLIS).

**Forecast:** Small-scale breeding could begin in spring breeding areas in western coast of Pakistan and southeastern Iran, but significant developments are not expected during the forecast period (DPPQS/India, FAO-DLIS).

**Red (Nomadic) Locust (NSE):** The NSE situation in Tanzania is becoming a threat in March. Several swarms were reported escaped from the Ikuu-Katavi outbreak area and dispersed in a westerly direction on March 30<sup>th</sup> and 31<sup>st</sup> as well as April 1<sup>st</sup>. A similar situation is expected in Wembere plains, Malagarasi Basin and North Rukwa plains where favorable breeding conditions persisted. Three low density swarms (100,000-300,000 locusts/ha) were seen over a total of 2,600 ha. Concentrations of 30,000-80,000 locusts/ha were detected in Lake Chilwa/Lake Chiuta plains between Malawi and Mozambique. Survey was in progress in the Kafue Flats and the

Lukanga swamps in Zambia at the time this update was compiled. Low density populations were reported in the Buzi-Gorongozo and Dimba plains in Mozambique through community-based monitoring.



(Red locust mating in Wembere plains in Tanzania, in November, 2011, IRLCO-CSA)

**Forecast:** NSE swarms will likely continue escaping especially in Ikuu-Katavi in Tanzania where several swarms have already escaped and migrated westwards. A similar situation will likely prevail in the Wembere plains, Malagarasi Basin and North Rukwa plains in Tanzania and in Lake Chilwa/Lake Chiuta plains in Malawi/Mozambique. Intensive ground and aerial surveys and control interventions will be undertaken by IRLCO-CSA in collaboration with the concerned MoAs and assistance will be sought from development partners.

All relevant MoA personnel in Tanzania and concerned neighboring countries are advised to remain vigilant and immediately report any locust sightings to IRLCO-CSA to facilitate appropriate action (IRLCO-EA).

**Madagascar Migratory Locust (LMC):** Aerial surveys and control interventions that commenced early last week in the outbreak areas are in progress. More than 2,500 ha were reported treated on March 14, 16, 17 and 18 (1,500 with conventional pesticides and 1,000 ha with a biopesticide (GreenMuscle). FAO is also working with partners in West Africa to

launch pesticide triangulation<sup>2</sup> for Madagascar (AELGA, FAO-ECLO, FAO-CNA).

**Forecast:** LMC and NSE will further develop during the forecast period in areas where good rains fell over the past months in the transient and central gregarization and multiplication zones. Vigilance, timely assessments and reporting as well as rapid interventions are essential to avert any major threats to agriculture and pasture. USAID/OFDA is closely monitoring the situation through AELGA project as well as other means (AELGA, FAO-CNA).

**Moroccan (DMA), Italian (CIT) and Migratory (LMI):** No update was received on the status of these pests in CAC at the time this report was compiled, but it is expected that locusts will soon begin hatching as the temperature rises and conditions become favorable, however, significant developments are not expected in the coming weeks (AELGA).



(Locust prone CAC countries, FAO)

**Australian Plague Locust (APL):** No update was received at the time this report was compiled. However, small swarms may have formed in parts of Northeast South Australia may have begun laying eggs which may have developed or go into diapause.



(Australian plague locust, source: APLC)

**Forecast:** (APLC). The eggs that were laid from local populations from mid-March on and from redistributed adults will likely go into diapause till next spring. The population level is expected to remain low in New South Wales, Queensland and Victoria and no major agricultural risk is expected during this time (from APLC).

**Timor and South Pacific:** No update was received in March in Timor and South Pacific, but some activities are expected to have occurred during this period (AELGA).

**African Armyworm (AAW):** AAW outbreaks were not reported in March. Only positive trap catches were recorded in parts of Tanzania

<sup>2</sup>. Pesticide triangulation is a process by which a third party (for ETOPs it is usually FAO) starts negotiations with countries where excess inventory of pesticides are present and those that are in dire need. Often, countries with excess inventory donate certain quantities of their stocks or sell at a reduced price to the countries in need and FAO facilitates transportation. When planned and executed effectively, this option benefits both the donating country as well as the recipient. The mechanism has been tried several times and found viable for immediate pest control and to reduce the risk of obsolete pesticides as well as save costs and time.

during this period (DLCO-EA, IRLCO-CSA, PHS/Tanzania).

**Forecast:** The AAW outbreak season is winging down in Malawi, Mozambique, Zambia and Zimbabwe. However, the AAW season has commenced in Tanzania and will likely begin in Kenya during the forecast period. Trap operators and community forecasters are encouraged to continue monitoring moth catches and report to crop protection staff and alert farmers (AELGA and IRLCO-CSA).

**Quelea (QQU):** QQU birds were reported causing damage to irrigated rice in Siaya District of Nyanza Province in Kenya where six roosts with an estimated 2.5 million birds had been located in March. Crop Protection Branch of the MoA will be launching control operations in collaboration with DLCO-EA.

In Tanzania, QQU outbreaks were reported in Singinda, Dododma, Shinyanga and Kilimanjaro regions. Plans are underway for PHS of the MoA to locate roosting areas and launch control interventions.

Sorghum and millet crops were attacked by QQU in Mashonaland Central, Manicaland, Matebeleland South and Masvingo Provinces in Zimbabwe where Cyanophos (Falcolan 520 ULV) was being used to control the pest. No reports of QQU damage was reported in Malawi, Zambia or other countries during this period (AELGA, DLCO-EA).

**Forecast:** QQU birds will likely become problematic to small grain crop growers in the Rift Valley and Nyanza Provinces of Kenya, in Kilimanjaro, Morogoro, Dodoma, Singinda and Shinyanga regions in Tanzania; in Chokwe Rice Irrigation Scheme in Ghaza province of Mozambique and in Zimbabwe where winter wheat is grown (AELGA, IRLCO-CSA).

**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 colony composed of a million birds (very common) is capable of consuming and destroying 7-10 tons of seeds/day (enough to feed 15,000-20,000 people for a day).

**Rodents:** No update was received on rodents during this month, but the pest remains a constant threat to both pre- and post-harvest crops and produces in many countries around the globe.

**Note:** Several raptor birds, such as barn owl, *Tyto Alba* and other animals are known nature's biological control agents that contribute to maintaining the balance between outbreaks and a period of lull. End note.

Front-line countries where ETOP outbreaks first occur are advised to remain vigilant. Countries in the invasion zones should maintain the capacity to monitor and avoid any unexpected surprises. DLCO-EA, IRLCO-CSA, national PPDs, CNLAs, DPVs, ELOs, and others are encouraged to continue sharing information with partners and other stakeholders as often as possible. Lead farmers and community forecasters are encouraged to remain vigilant and report any ETOP sightings to field agents and other contact persons.

### **Inventories of Acridid Pesticide Stocks**

ETOP pesticide inventory slightly changed during March due to control operations treated a cumulative total of more than 7,615 ha in Algeria, Libya and Madagascar.

Mindful of the risk of pesticides becoming obsolete once past their end-of-life, ETOP-prone countries, particularly those with large inventories, but less likely to use them within a reasonable time, are encouraged to test their stocks regularly and determine whether they

should use, retain, share or discard them immediately.

All options should be explored to avoid the risks that old stocks pose to humans, the environment, and non-target organisms as well as the huge financial burden associated with disposing them.

A judiciously executed triangulation of stocks from countries with large inventory to where there are immediate needs is a double-edged alternative that is worth considering.

**Note:** The core message of **pesticide stewardship Program** is to strengthen the national and regional pesticide delivery systems by linking partners at different levels and thereby reduce pesticide related health risks and environmental pollution and improve food security as well as contribute to the national economy. **End note.**

#### Estimated (acridid) pesticide inventories

Country	Quantities in '000l/kg <sup>§</sup>
Algeria	1,800~
Chad	108.09~
Eritrea	43.9~
Egypt	Data not available
Ethiopia	1.9+~
Libya	Data not available
Madagascar	Data not available
Mali	208.8d~
Mauritania	435.3~
Morocco	4,100~
Niger	28.21+
Senegal	156~~
Saudi Arabia	Date not available
NSD	860"
Tunisia	167.6~
Yemen	33.00 + .527 kg GM
These quantities include ULV, EC and dust formulations	
~ data not necessarily current	
~~ as of September 28, 2011	

= Mali donated 21,000 l for RL in Malawi, Mozambique and Tanzania late last year and FAO facilitated the triangulation + quantity reported in Agadez @ left-over stocks of Chlopyrifos from the 2003-5 DL campaign was tested for quality and found to be usable through 2012 This includes EC, ULV and Dust for all crop protection uses  
GM = GreenMuscle  
b = biopesticide (Madagascar)  
c = conventional pesticides (Madagascar)  
g = insect growth regulator (Madagascar)

#### LIST OF ACRONYMS

AAW	African armyworm ( <i>Spodoptera expempta</i> - SEX)
AELGA	Assistance for Emergency Locust Grasshopper Abatement
AfDB	African Development Bank
AME	<i>Anacridium melanorhodon</i>
APL	Australian Plague Locust
APLC	Australian Plague Locust Commission
CAC	Central Asia and the Caucasus
CERF	Central Emergency Response Fund
CIT	<i>Calliptamus italicus</i>
CLCPRO	Commission de Lutte Contre le Criquet Pélerin 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
DL	Desert Locust
DLCO-EA	Desert Locust Control Organization for Eastern Africa
DMA	<i>Dociostaurus maroccanus</i>

DPPQS	Department of Plant Protection and Quarantine Services	PHD	Plant Health Directorate
		PHS	Plant Health Services, MoA Tanzania
DPV	Département Protection des Végétaux (Department of Plant Protection)	PPD	Plant Protection Department
		PPSD	Plant Protection Services Division/Department
ELO	EMPRES Liaison Officers	PRRSN	Pesticide Risk Reduction through Stewardship Network
EMPRES	Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases	QQU	Quelea quelea
		SARCOF	Southern Africa Region Climate Outlook Forum
ETOP	Emergency Transboundary Outbreak Pest	SGR	Schistoseca gregaria
GM	Green Muscle (a fungal-based biopesticide)	SWAC	South West Asia DL Commission
ha	hectare (= 10,000 sq. meters, about 2.471 acres)	TAG	Technical Assistance Group
IRIN	Integrated Regional Information Networks	USAID	Unites States Agency for International Development
IRLCO-CSA	International Red Locust Control Organization for Central and Southern Africa	UN	the United Nations
ITCZ	Inter-Tropical Convergence Zone	ZEL	Zonocerus elegans, elegant grasshopper
ITF	Inter-Tropical Convergence Front = ITCZ)		
FAO-DLIS	Food and Agriculture Organizations' Desert Locust Information Service		
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		
NOAA	National Oceanic and Aeronautic Administration		
NSD	Republic of North Sudan		
NSE	Nomadacris septemfasciata		
OFDA	Office of U.S. Foreign Disaster Assistance		

**Point of Contact:**

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