

**Emergency Transboundary
Outbreak Pest (ETOP) Situation
Report for March with a Forecast
till mid-May, 2011**

Summary

The **Desert Locust (SGR¹)** activities continued in Saudi Arabia and Egypt, but declined in Mauritania and Sudan in March. Control operations treated more than 40,000 ha mainly on the central Red Sea coasts of Saudi Arabia and southeastern Egypt, northwest Mauritania and Sudan. Small-scale control operations were also reported in southern Morocco and Algeria. Some solitary adult locusts were present in northern Niger, Yemen, Oman and western Pakistan, but other outbreak and invasion areas remained calm (CNLA/Mauritania, CNLAA/Morocco, DDLC/Libya, DLCO-EA, DLMCC/Yemen, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia and PPD/Sudan).

Forecast: Swarms and adults on the coastal areas of Saudi Arabia could move into the interior of the country during the forecast period. There is also a likelihood of swarms crossing the Red Sea and reaching northern Sudan. Adult locusts in northwest Mauritania and southern Morocco could also move to the southern side of the Atlas Mountains and begin laying eggs. The current political unrest in some of the locust-affected countries in North Africa and the Middle East could undermine survey and monitoring. Small-scale breeding is likely in spring breeding

¹ Definitions of all acronyms can be found on the last pages of this report.

areas in Iran and Pakistan and increase locust numbers in the coming months. Active surveillance and preventive interventions are recommended to abate locust movements between breeding areas (CNLA/Mauritania, CNLAA/Morocco, DDLC/Libya, DLCO-EA, DPPQS/India, DPV/Tunisia, FAO-DLIS, INPV/Algeria, PPD/Ethiopia and PPD/Sudan).

Other ETOPs

Red (Nomadic) Locust (NSE): No update was received at the time this report was compiled.

Madagascar Migratory Locust (LMC):

The locust situation continued further developing in Madagascar where large numbers of hoppers and immature and mature adults were treated in more than 33,000 ha by air and ground means during the 1st and 2nd dekads of March. This brings the total number of ha treated or protected since the beginning of the current campaign to 88,014 ha (FAO-CNA).

Forecast: Given the presence of favorable ecological conditions, the likelihood of locust activities continuing in the coming months is significant and will push the current campaign.

The United States Agency for International Development through the Office of US Foreign Disaster Assistance responded generously to an appeal issued by the UN/FAO on behalf of the GoM. China makes some contribution to CNA. European Commission, Switzerland and France have also pledged assistance and partners will follow suit.

Moroccan (DMA), Italian (CIT) and Migratory (LMI) locusts in Central Asia and the Caucasus (CAC): No locusts were reported in March and significant activities are not expected during the forecast period. However, as the weather starts getting warmer, DMA will likely begin appearing and forming hoppers and bands in some areas in northern Afghanistan and adjacent areas in Tajikistan. Other countries in CAC will likely remain calm. CIT and LMI are not expected to appear during the forecast period. Nevertheless, routine surveillance and monitoring are essential (AELGA).

Armyworm (AAW): AAW outbreaks and moth catches were reported in Mvomero, Dodoma, Moshi, Mbeya, Rombo and other places in Tanzania through March. It is likely that infestations will occur in Northern and northeastern parts of Tanzania and in the Southern Rift Valley and Eastern parts of Kenya where rainfall was recorded. Trap operators are advised to remain alert and report moth catches to appropriate persons (AELGA, DLCO-EA).

Quelea (QQU): A DLCO-EA aircraft controlled QQU outbreaks on 110 ha in Dodoma Region in Tanzania where the birds were seen threatening Sorghum, Millet & Paddy Rice in March. DLCO-EA aircraft also controlled QQU infestations in more than 175 ha in Embu, Moya, Kigo and Kiratu localities in the Eastern Province in Kenya where the birds were seen feeding on rice crop (DLCO-EA).

OFDA/AELGA (Assistance for Emergency Locust and Grasshopper

Abatement) will continue 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, the World Bank, USAID, 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 DL outbreaks and avoid the threats they pose to food security and livelihoods of vulnerable communities.

CNLAs' ability to avert, respond to and mitigate devastating DL outbreaks and invasions need to be encouraged and supported.

OFDA ETOP Activities

- OFDA/TAG continues its initiatives in pesticide risk reduction through stewardship network (PRRSN) to ensure safety of vulnerable people as well as protect their assets and the environment against pesticide pollution. OFDA/TAG has successfully launched two sub-regional PRRSNs in Eastern Africa and the Horn. Discussions that began several months ago to launch similar initiatives in North Africa and the Middle East were halted by the ongoing situation in the regions. Dialogue on introducing similar initiatives in other regions is underway.
- OFDA continues its support for capacity strengthening to mitigate, prevent and

respond to ETOP emergencies and associated human health risks and environmental pollutions.

- OFDA encourages and supports [FAO's] initiative to strengthen national and regional capacities in Central Asia and the Caucasus (CAC) to help coordinate locust monitoring, reporting as well as interventions among neighboring countries. The ultimate goal of the initiative is to prevent and mitigate locust threats and improve 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/

Weather and ecological conditions

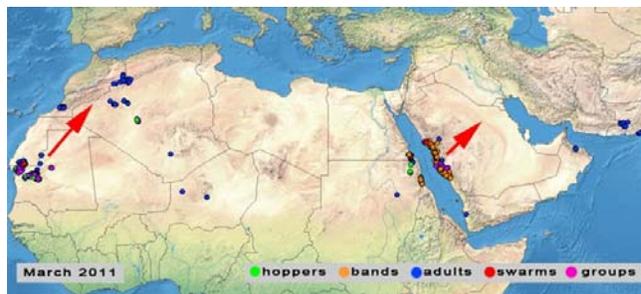
During the past 30 days, rainfall has remained largely below-average over parts of southern Africa, including northeastern South Africa, central Mozambique, Malawi, southern Zambia, Zimbabwe, and eastern Botswana. The most rainfall deficits remained over eastern Zimbabwe and central Mozambique. Significantly above average rainfall was recorded over southern Angola and northern Namibia and rainfall was also above average in the northern areas of Madagascar, Mozambique and Tanzania. Below average moisture conditions were present over eastern Kenya and dry conditions prevailed in eastern Ethiopia and over most of Somalia (NOAA, PPD/Ethiopia). Light to moderate rains fell in a few isolated places on 2nd, 3rd, 4th and 9th March in Bikaner, but dry conditions persisted in Jodhpur, Saurashtra and Kutch in north Gujarat and Rajasthan

during the first fortnight in March (DPPQS/India).

Note: *Changes in the 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 began declining in Mauritania where control operations treated adults and hoppers on close to 4,770 ha (16,890 ha where treated in February and 19,450 ha were controlled in January). Small-scale control operations were also launched in southern Morocco against small swarms and groups of adults and in central Sahara in Algeria where 314 and 290 ha were treated respectively. A few adults were observed in Tamesna in northern Niger. No locusts were reported in Mali, Chad or other countries in the region (CNLA/Mauritania, CNLAA/Morocco, DDLC/Libya, DPV/Tunisia, FAO-DLIS and INPV/Algeria).



(SGR Map, FAO-ECLC, 4/2011)

Forecast: Despite some hatching that occurred in March in northwestern Mauritania, locust numbers will likely continue declining in the coming months, but for a few concentrations in areas of green vegetation. Adult may move to the southern side of the Atlas Mountains in Morocco and Algeria and begin laying with the onset of spring weather. No report was received

from Libya in March, but there is a likelihood of low numbers of isolated solitary adults persisting near Ghat and Ghadames in the western parts of the country. Active surveillance and monitoring are crucial to avoid an increase in locust numbers (CNLA/Mauritania, CNLAA/Morocco, DDLC/Libya, DPV/Tunisia, FAO-DLIS and INPV/Algeria).

SGR - Central Outbreak Region: The SRG situation remained concerning in Saudi Arabia where hopper bands, groups and adults were treated on more than 28,960 ha in March on the central Red Sea coasts (>20,700 ha were treated in February in Saudi Arabia). In Sudan the situation began declining and only 3,740 ha were sprayed during this month, but locust numbers increased in Egypt where close to 2,230 ha were sprayed in March (only 265 ha were sprayed in February in Egypt). A late received report indicated that some 720 ha were sprayed in Eritrea in February, but no data was available for March. Low numbers of adults were present along the Red Sea coast in Yemen and on the northern coast in Oman, but no locusts were reported in winter breeding areas in eastern Ethiopia and northern Somalia. Other countries in the central region also remained calm during this period (DLCO-EA, FAO-DLIS, PPD/Ethiopia, and PPD/Sudan).

Forecast: Locust activities will likely continue in Saudi Arabia and swarms will form and move into spring breeding areas in the interior of the country and breed. Breeding may commence along the coastal areas in Yemen and locust numbers will increase if more rains fall. Active surveillance, monitoring and preventive interventions are essential to avoid further developments and invasions (DLCO-EA, FAO-DLIS, AELGA, PPD/Ethiopia and PPD/Sudan).

SGR - Eastern Outbreak Region: Low numbers of immature and mature adult locust were reported in spring breeding areas in western Pakistan. No locusts were detected during surveys carried out in March in adjacent areas in Iran. The scheduled desert regions in India remained free of locusts during this period (DPPQS/India, FAO-DLIS).

Forecast: Small-scale breeding will likely commence in areas of recent rainfall in Baluchistan in western Pakistan and in adjacent areas in southeastern Iran during the forecast period. Locust numbers may slightly increase in these areas during the forecast period (DPPQS/India, FAO-DLIS).

Madagascar Migratory Locust (LMC): The locust situation continued further developing in breeding, gregarization and concentration zones in Madagascar in March. Large numbers of hoppers and immature and mature adults were reported in several places in the southern, southwestern and central parts of the country. Third generation hoppers have also been observed during this time. Aerial and ground control operations treated more than 33,000 ha during the 1st and 2nd dekads of March bringing the total number of ha treated or protected since the beginning of the spray operations on November 28, 2010 to 88,014 ha. The two helicopters dispatched for the campaign have logged in more than 555 hours as of 20 March, 2011 (FAO-CNA).

Forecast: Locust activities will likely continue in the coming months and impacts crops and pasture. ***CNA and partners must remain vigilant and continue monitoring and reporting of areas where egg laying has occurred and locust developments have been detected or will be likely must be reported and responded to as rapidly as possible.***

OFDA/TAG will continue monitoring the situation in close collaboration with FAO,

CNA and other partners and issue updates and provide advice as often as necessary.

Moroccan (DMA), Italian (CIT) and Migratory (LMI) in Central Asia and the Caucasus (CAC): No locusts were reported in March and significant activities are not expected during the forecast period. However, DMA will likely begin appearing and forming hoppers and bands in some areas in northern Afghanistan and adjacent areas in Tajikistan as the weather starts improving and the temperatures start rising. Other countries in CAC will likely remain calm. CIT and LMI are not expected to appear during the forecast period. Routine surveillance and monitoring are essential (AELGA).



(Locust prone CAC countries, FAO)

Australian Plague Locust (APL): Two high density generations of swarms were confined to southern New South Wales, South Australia and across western Victoria during March. The highest swarm activities during this period were reported in the southern Wimmera and Grampians districts in western Victoria. Swarms were also reported in the southern Riverina of New South Wales, North Central Victoria and parts of the Murray Valley and Northeast regions in South Australia. Sporadic swarm egg laying was detected in the Riverina, and several locations in Victoria and South Australia during March. Adult population

density remained low in most other regions (APLC).

Forecast: Egg laying will continue in parts of western Victoria and southern South Australia in the coming weeks. The majority of eggs laid earlier and during this period will diapause (over season) until October when hatching will begin and followed by high density nymphs in some locations. The chance of the relatively low populations of locusts from northern New South Wales, northern South Australia, or Queensland posing a threat to agricultural areas in the southern parts of the country is very slim (APLC).



(Australian plague locust, source: APLC)

Timor and South Pacific: No update was received in March, but it is likely that the migratory locust may have been posing a threat to crops and pasture in the past months in East Timor. The situation will likely further develop during the forecast period. It is important that a proactive stance is maintained to avoid significant damage to crops and pasture (AELGA).

African Armyworm (AAW): AAW outbreaks were reported in Mvomero, Moshi and Rombo and moth catches were recorded in Mbeya, Kyela, Muheza, Mulbadaw, Moshi, Mbozi, Shimbi and Mashariki in Tanzania during March. Moth catches were also reported as early as mid-February in several places in Morogoro, Dodoma, Mbeya and other places in the country (AELGA, DLCO-EA).

Forecast: AAW infestations are likely in northern and northeastern Tanzania and the Southern Rift Valley and Eastern parts of Kenya

during the forecast period. Trap operators, including members of the community forecasters where available, are advised to remain alert and report moth catches to the appropriate bodies (AELGA, DLCO-EA).

Quelea (QQU): QQU outbreak was reported in Dodoma region in Tanzania where in March a DLCO-EA aircraft sprayed 5 roosts on Acacia trees, reed and Typha over 110 ha. The pest was threatening Sorghum, Millet and Paddy. Infestations were also controlled by a DLCO-EA aircraft in more than 175 ha in Embu, Moya, Kigo and Kiratu localities in the Eastern Province in Kenya where the pest was seen feeding on rice crop. No reports were received from other countries in the region during this period. In February DLCO-EA spray aircraft treated QQU roosts on 150 ha in Kilimanjaro and Mbeya regions of Tanzania and more than 140 ha in Garisa and Moyale in Kenya (AELGA, DLCO-EA).



(A QQU roost, a file photo; free encyclopedia)

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 rodent outbreak or infestation was reported during this month,

but the pest remains a threat to both pre- and post-harvest crops and produces.

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.

Front-line countries are advised to remain vigilant. Countries in the invasion zones should maintain the capacity to 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.

Acridid Pesticide Stocks

Close to a total of 80,000 l of pesticides were used in March in Algeria, Morocco, Madagascar, Mauritania, Saudi Arabia, Sudan, and Egypt combined. Mindful of the phenomenon of pesticide becoming obsolete once past their shelf-lives, ETOP-prone countries, particularly those with large stocks, but are less likely to use them within a reasonable time, are encouraged to test their inventories regularly and determine whether they should use, retain, share or discard them immediately. All options should be explored to avoid severe human health impacts as well as huge environmental and financial burdens associated with handling and disposing of large stocks of obsolete pesticides.

A judiciously executed triangulation of stocks from countries with large inventory to where the need exists is a double-edged alternative that is worth considering.

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

Estimated [acridid] pesticide inventories as of March, 2011

Country	Quantities in '000l/kg ^s
Algeria	1,800~
Chad	108.09~
Eritrea	43.90~
Egypt	Data not available
Ethiopia	15.780
Libya	Data not available
Madagascar	34.65c + 17g + .6b
Mali	209d~
Mauritania	440.00~
Morocco	4,104~
Niger	28.24+
Senegal	519~
Saudi Arabia	Date not available
Sudan	860.00"
Tunisia	167.60~
Yemen	39.50 + .527 kg GM

^sThese quantities include ULV, EC and dust formulations

~ data not necessarily current

d = 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-DL campaign was tested for quality and found to be usable through 2012

^mThis 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
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
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
GM	Green Muscle (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
Kg	Kilogram (~2.2 pound)
L	Liter (1.057 quarts or 0.264 gallon or 33.814 US fluid ounces)
LMC	<i>Locusta migratoriacapito</i>
LMM	<i>Locusta migratoria migratorioides</i> (African Migratory Locust)
LPA	<i>Locustana pardalina</i>
MoAFSC	Ministry of Agriculture, Food Security and Cooperatives
MoARD	Ministry of Agriculture and Rural Development
NOAA	National Oceanic and Aeronautic Administration
NSE	<i>Nomadacris septemfasciata</i>
OFDA	Office of U.S. Foreign Disaster Assistance
PHD/S	Plant Health Directorate/ Services
PPD	Plant Protection Department
PPSD	Plant Protection Services Division/Department
PRRSN	Pesticide Risk Reduction through Stewardship Network
QQU	<i>Quelea quelea</i>
SGR	<i>Schistoseca gregaria</i>
SWAC	South West Asia DL Commission
TAG	Technical Assistance Group
USAID	Unites States Agency for International Development
UN	the United Nations
ZEL	<i>Zonocerus elegans</i> , elegant grasshopper

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To learn more about our activities and the programs we support, please, visit our website at:

http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/

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