Emergency Transboundary Outbreak Pest (ETOP) Situation Report for February with a Forecast till mid-April, 2011

Summary

The **Desert Locust** (**SGR[1]**) situation continued further developing in February in Sudan, Saudi Arabia and Mauritania where control operations targeted immature and mature adults and hoppers. Limited activities also occurred in southern Morocco, Algeria and Egypt. Close to 41,300 ha were treated in total in all these countries during this period. No locusts were reported in northern Mali, Niger or Chad where dry conditions prevailed and no reports were received from Yemen or Eritrea, where some activities are expected to have occurred during this period. Other countries in Sahel West Africa, North Africa, East and Horn of Africa, the Middle East and southwest Asia remained calm during this period (CNLA/Mauritania, CNLAA/Morocco, DDLC/Libya, DLCO-EA, DLMCC/Yemen, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia and PPD/Sudan).

Forecast: The locusts in Sudan and the coastal areas of Saudi Arabia could form more swarms and move into spring breeding areas in the interior of Saudi Arabia and breed. Adult groups in northwestern Mauritania and southern Morocco could also move to the southern side of the Atlas Mountains in and begin breeding with the onset of spring rains and warmer temperature during the forecast period. Although locusts were not reported in Libya during this period, it is likely that low numbers of isolated solitary adults may be present and persist near Ghat and Ghadames in the western and southwestern parts of the country. Surveys were not possible in Yemen, but it is very likely that some breeding took place in areas of recent rainfall along the Red Sea coasts. *The current political unrest in many of the locust-affected countries in North Africa and the Middle East affect survey, monitoring and control interventions and could exacerbate the situation*. Vigilance must be maintained and survey and control operations continued to minimize locust movements to spring breeding areas in the coming weeks. Limited-scale activities will commence in spring breeding areas in southeastern Iran and southwestern Pakistan. Other countries will likely remain calm during the forecast period (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**): Early instar hoppers of NSE were reported on the Belomotra plateau in Madagascar in February. No report was received in February on NSE from the IRLCO-CSA region, but it is likely that the situation remained calm in the outbreak areas except the sighting of hoppers earlier by fishing communities in North Rukwa plains fishing communities near Lake Rukwa. The hoppers may have fledged or fledging in these areas (AELGA, FAO-CNA).

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

Madagascar Migratory Locust (LMC): Large numbers of hopper groups, bands and immature and mature adults were observed in several places in the south and southwestern parts of the country (in Belomotra plateau, Bekily-Fotandrevo, lowlands of Tuléar, north of the mouth of Mangoky River, etc.) in February. More than 32,300 ha were sprayed during the 1st and 2nd dekads of the month and a total of 40,540 ha have been treated since the current campaign began on October 13th, 2010 (FAO-CNA).

Forecast: Considering the favorable breeding conditions created by the recent rains and the rate at which the locusts are currently developing, there is a likelihood of more locusts appearing and needing survey and spray operations in the coming months in the south and southwest parts of the country. Vigilance and timely interventions are essential to avoid any major impacts on crops and pasture.

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. European Commission, Switzerland and France have also pledged assistance and it is anticipated that other donors and partners will follow suit.

Moroccan (DMA), **Italian (CIT)** and **Migratory (LMI)** locusts in Central Asia and the Caucasus (CAC): No locusts were reported at the time this report was compiled 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. Routine surveillance and monitoring are essential (AELGA).

Armyworm (AAW): Small-scale armyworm infestations were reported in February in Nangoo and Mkungu villages in Lindi Region in Tanzania. Positive trap catches were reported in several places in Tanzania. AAW infestation will likely occur in the northern, coastal and western regions of Tanzania where moderate to heavy rains were reported. Moths will likely migrate in the coming weeks to the coastal and eastern parts of Kenya where some rainfall occurred. Trap operators are advised to remain alert and report to appropriate persons (AELGA, DLCO-EA).

Quelea (QQU): DLCO-EA spray aircraft controlled QQU outbreaks on 150 ha in Kilimanjaro & Mbeya regions of Tanzania in February. The birds were seen feeding on irrigated rice crops. Damage was minimized by timely interventions. Aerial control operations were also launched in Garsen in the Coastal Province and Moyale in the Eastern Province in Kenya where QQU roosts and populations were controlled on more than 140 ha. The birds were seen feeding on rice crops (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 all 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 and technicians 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 to avoid pesticide risks through stewardship network (PRRSN) to help prevent pesticide related disasters and 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 are underway to launch similar initiatives in North Africa, Western Africa and the Middle East. Potential partners will be approached in Eastern Europe, Central Asia, the Caucuses as well as the LAC regions where OFDA/TAG intends to introduce similar initiatives.

- OFDA continues its support for capacity strengthening to mitigate, prevent and respond to ETO emergencies and associated human health risks and environmental pollutions.

- OFDA contributed to 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. OFDA will continue supporting these initiatives.

All SITREPs can be accessed on our website at:

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

Weather and ecological conditions

In Madagascar, the passage of cyclone Bingiza made a landfall on February 14th generated strong winds exceeding 15 m/s and heavy rains in the locust outbreak and invasion areas in the south and southwest of the country, including Tuléar and surrounding areas, Befandriana-Sud and Sakaraha, Ankaraobato, Betioky and Ambovombe reported moderate rainfall during this period. The Cyclone also brought heavy rains to the east, southeast and other parts of the country during the early part of the 2nd dekad of February. Moisture was relatively low in most outbreak areas except in some localities that received adequate amounts of rainfall for ETOP breeding.

***Note**: Changes in the weather pattern 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 continued further developing in Mauritania where control operations treated immature and mature adults and hoppers on 16,890 ha in February (19,450 ha were treated in January). Limited activities also occurred in southern Morocco and Algeria where a total of 88 ha were treated during February. No locusts were reported in northern Mali, Niger or Chad where dry conditions prevailed and other invasion areas in the regions remained calm (CNLA/Mauritania, CNLAA/Morocco, DDLC/Libya, DPV/Tunisia, FAO-DLIS and INPV/Algeria).

Forecast: Hatching will commence in northwestern Mauritania and southern Morocco in the coming weeks, but significant developments are not expected. Adult locusts from these areas could move to the southern side of the Atlas Mountains in Morocco and Algeria and begin breeding with the onset of spring rains and the warming of the temperatures. Locusts were not reported in Libya during this period, but it is likely that low numbers of isolated solitary adults are present and will persist near Ghat and Ghadames in the western and southwestern parts of the country. Vigilance must be maintained and survey and control operations continued to the extent possible and avoid and/or minimize locust numbers (CNLA/Mauritania, CNLAA/Morocco, DDLC/Libya, DPV/Tunisia, FAO-DLIS and INPV/Algeria).

SGR - Central Outbreak Region

The SRG situation remained active in February in Sudan where more than 10, 160 ha were reported infested and close to 9,845 ha were treated. Some 14,196 ha were also treated during this period in Saudi Arabia where late instar hopper bands and immature and mature adults were reported along the northern and central parts of the Red Sea coasts. In Egypt, 265 ha were treated in February in the southeastern part of the country and 580 ha were sprayed in January. Surveys were not possible in Yemen due to the ongoing situation, but small-scale breeding may be in progress along the Red Sea coast. A late received report indicated that 200 ha were sprayed in Eritrea in January against hoppers and immature and mature adults. Although reports were not received during this period, it is likely that some activities may have continued in these areas. The situation remained calm in eastern Ethiopia and northwestern Somalia due to dry conditions that prevailed in here and the coast where solitary adults may have persisted but failed to breed due to unfavorable conditions. No locusts were reported in other countries in the region during this period **(**DLCO-EA, FAO-DLIS, PPD/Ethiopia, and PPD/Sudan).

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

SGR - Eastern Outbreak Region

No locusts were reported in February in the eastern outbreak areas, in Iran, Pakistan and India, but solitary adults may be present in spring breeding areas in southeast Iran and southwest Pakistan (DPPQS/India, FAO-DLIS).

Forecast: Small-scale breeding will likely occur in Baluchistan, western Pakistan and adjacent areas in southeaster Iran following the spring rains, but locust numbers will likely remain low during the forecast period (DPPQS/India, FAO-DLIS).

Red (Nomadic) **Locust (NSE**): Early instar hoppers of NSE were reported on the Belomotra plateau in Madagascar (FAO-CNA). No report was received in February on NSE from the IRLCO-CSA region, but the situation may have remained calm in the outbreak areas except near Lake Rukwa were hoppers were sighted earlier by fishing communities in North Rukwa plains. The hoppers may have fledged or fledging in these areas (AELGA, IRLCO-CSA).

Forecast: Hoppers will likely persist in the outbreak areas where ecological conditions are favorable and breeding took place. Fledglings are expected to appear by late March to April. Active surveillance and monitoring are essential particularly in areas North Rukwa plains, Wembere and Ikuu-Katavi with main focus on areas closer to crop fields (AELGA, IRLCO-CSA).

Madagascar Migratory Locust (LMC): The locust situation continued developing in the primary breeding and transitional areas and concentration zones. Large numbers of hopper groups, bands and immature adults as well as mature adults were observed in several places in the south and southwestern parts of the country (in Belomotra plateau, Bekily-Fotandrevo, lowlands of Tuléar, north of the mouth of Mangoky River, etc.) in February. More than 32,300 ha were sprayed during the 1st and 2nd dekads of the month and a total of 40,540 ha have been treated since the beginning of the current campaign on October 13th, 2010 (FAO-CNA).

Forecast: Fledglings will form groups in the Bekily-Fotadrevo, Mahafaly plateau and the surroundings of Androvo and begin mating giving rise to more robust and persistent 3rd generation populations. Considering the favorable breeding conditions created by the recent rains and given the rate at which the locusts are currently developing, there is a likelihood of more survey and spray operations needing in the south, southwest in Bakily-Fotadrevo and other areas in the region, including Fiherenana, Fotadrevo and Mahafaly, in Ilempo in the coming months. Vigilance and timely interventions are essential to avoid any major impacts to crops and pasture.

CNA and DPV 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 advise as often as necessary.

Moroccan (DMA), **Italian (CIT)** and **Migratory (LMI)** locusts in CAC: Locust activities were not reported at the time this SITREP was compiled and significant developments are not expected during the forecast period. However, as the weather starts getting warmer, DMA will likely begin hatching and form hoppers and bands in some areas in northern Afghanistan and southern Tajikistan. Other countries will likely remain calm during the forecast period as CIT and LMI remain in hibernation. Routine surveillance and monitoring are essential.

Australian Plague Locust (APL): Fledging commenced in early February resulting in localized high density adults and swarms in New South Wales and North Central Victoria. Fledging also continued into late February in

Wimmera and Grampians districts in western Victoria and South Australia.

(Locust prone CAC countries, FAO)

Adult populations remained low in most other regions, but localized breeding and invasions were evidenced in some areas (APLC).


(Australian plague locust, source: APLC)

Forecast: Swarms will lay eggs in localized areas in north-central and western Victoria and southern South Australia, but most eggs will likely diapause till October. High density hoppers will likely develop in some locations during spring. Egg laying is possible in the south-eastern Riverina from early March on. Significant numbers of locusts will not move to agricultural areas in northern New South Wales, northern South Australia, or Southwest Queensland (APLC).

Timor and South Pacific: No update was received in February, but it is likely that the migratory locust may have be posing a threat to crops and pasture in the past several weeks following the summer rains 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**): Small-scale armyworm infestations were reported in February in Nangoo and Mkungu villages in Lindi Region in Tanzania. Positive trap catches were reported in several places in Tanzania

Forecast: Armyworm infestation will likely occur in the northern, coastal and western regions of Tanzania where moderate to heavy rains were reported. Moths will likely migrate in the coming weeks to the coastal and eastern parts of Kenya where some rainfall occurred. Trap operators are advised to remain alert and report to appropriate persons (AELGA, DLCO-EA).

Quelea (QQU): QQU outbreaks were reported in February in Kilimanjaro & Mbeya regions of Tanzania where DLCO-EA spray aircraft controlled roosts on 150 ha of acacia trees. The birds were reported feeding on irrigated rice crops, but damage was minimized by a timely intervention. DLCO-EA aircraft also controlled infestations in January in Mawndu and Makindu districts in the Eastern, Narok in the Rift Valley and Kisumu in the Western Provinces. The birds were seen feeding on maturing Sorghum crops. QQU infestations were also reported in Garsen in the Coastal Province and Moya in the Eastern Province in Kenya during this period. Aerial operations were launched from 22-26 February by DLCO-EA covering more than 140 ha in Garisa and Moyale. The birds were seen feeding on rice crops. No infestations were reported in other countries in the regions and no reports were received from IRLCO-CSA region during this period (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 nature's biological control agents that often 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

With the exception of control operations launched in Madagascar, Mauritania, Saudi Arabia, Sudan and Yemen, the existing pesticide stocks in the ETOP-prone countries were not significantly affected in February. The likelihood of some of the pesticides listed in the below table becoming obsolete increases as time goes by. Mindful of this phenomenon, ETOP-prone countries, particularly those with large stocks but are less likely to use them within a reasonable time, are encouraged to test their stocks regularly and determine whether they should retain, use, share or discard them immediately. All options should be explored to avoid 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 for February, 2011

Country	Quantities in '000l/kg[$]
Algeria	1,800~
Chad	108.09~
Eritrea	44.60~
Egypt	Data not available
Ethiopia	15.780
Libya	Data not available
Madagascar	77.45c + 17.2g + .6b
Mali	209d~
Mauritania	443.14~
Morocco	4,105~
Niger	28.24+
Senegal	519~
Saudi Arabia	Date not available
Sudan	864.12"
Tunisia	167.60~

Yemen	39.50 + .527 kg GM

$These 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
[m] 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 (**S**podoptera **ex**pempta - SEX)*
AELGA	*Assistance for Emergency Locust Grasshopper Abatement*
AME	***A**nacridium **me**lanorhodon*
APL	*Australian Plague Locust*
APLC	*Australian Plague Locust Commission*
CAC	*Central Asia and the Caucasus*
CERF	*Central Emergency Response Fund*
CIT	*Calliptamus italicus*
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	*Chortoicetes terminifera*
DDLC	*Department of Desert Locust Control*
DL	*Desert Locust*
DLCO-EA	*Desert Locust Control Organization for Eastern Africa*
DMA	*Dociostaurus maroccanus*
DPPQS	*Department of Plant Protection and Quarantine Services*
DPV	*Département Protection des Végétaux (Department of Plant Protection)*
ELO	*EMPRES Liaison Officers*
EMPRES	*Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases*
ETOP	*Emergency Transboundary Outbreak Pest*
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	*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*
NSE	*Nomadacris septemfasciata*
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	*Quelea quelea*
SGR	*Schistoseca gregaria*
SWAC	*South West Asia DL Commission*
TAG	*Technical Assistance Group*
USAID	*Unites States Agency for International Development*
UN	*the United Nations*
ZEL	*Zonocerus elegans, elegant grasshopper*

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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