

**Emergency Transboundary
Outbreak Pest (ETOP) situation
update for February with a forecast
till mid-April, 2010**

Summary

The **desert locust** (DL¹) situation remained calm in February in winter breeding areas due to unfavorable ecological conditions. Only a few scattered solitary adults and/or hoppers were reported in northern **Mauritania**, southwest **Libya** and along the Red Sea coasts in **Sudan** and **Saudi Arabia**. A similar situation may exist in northern **Niger** and **Mali** where surveys were undermined by the ongoing security situation. No locusts were reported in other outbreak regions during this time (CNLA/Mauritania, DDLC/Libya, DPPQS/India, FAO-DLIS, PPD/Ethiopia, and PPD/Sudan).

Forecast: Scattered adults will likely persist in winter breeding areas. Only small-scale breeding may occur in spring breeding areas along the **Iran-Pakistan** borders where good rains fell in February and in northwest Africa provided rains fall in the coming weeks. However, locust numbers will likely remain low and the situation will be calm during the forecast period (CNLA/Mauritania, DPPQS/India, CNLA/Niger, FAO-DLIS, PPD/Ethiopia, and PPD/Sudan).

OFDA Pest & Pesticide Activities

- OFDA/TAG continued its initiatives in pesticide risk reduction through

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

stewardship network (PRRSN) to help prevent pesticide related disasters and ensure safety of vulnerable people and communities as well as to protect their assets and the environment. OFDA/TAG launched the second sub-regional pesticide risk reduction workshop (the first for the Horn of Africa) from 23-27 August, 2009 in Ethiopia. Similar initiatives are being discussed with partners in **Kenya**, **Ghana** and **CRC/FAO** in **Cairo**.

- OFDA sponsored DLCO-EA's capacity strengthening and mitigation efforts to support emergency ETOP operations in the Greater Horn of Africa.
- OFDA continues supporting capacity strengthening through FAO's EMPRES programs to prevent, mitigate and respond to DL emergencies.
- The assessment missions that OFDA co-sponsored with FAO in Central Asia, the Caucasus and neighboring counties (CAC) has developed a proposal based on a five-year program aimed at strengthening national and regional capacities to help better coordinate locust monitoring, information sharing, prevention and control interventions.
- USD 200,000 in seed money provided by OFDA enabled FAO Pesticide Disposal and Prevention program to leverage an additional USD 2.2 million from the Global Environment Facility, Green Cross Switzerland, and other sources. These funds are used to help strengthen national capacities and develop and implement obsolete

pesticide disposal and prevention initiatives in Eastern Europe and CAC.

- OFDA co-sponsored an international workshop through the University of Maryland Eastern Shore. The workshop was conducted in Accra, Ghana from 14-16 October, 2009 and gathered more than 100 participants from dozens of countries. OFDA was represented by one of its Senior Technical Advisors and presented a paper on pesticide risk reduction as a humanitarian intervention.

Other ETOPs

Medium to high density hopper bands of red locust persisted in the North Rukwa plain, **Tanzania** where more than 3,000 ha were infested.

Forecast: Hoppers are expected to fledge into immature adults during the forecast period in most of the outbreak areas. IRLCO-CSA is planning to launch ground and aerial surveys to establish the intensity of the populations and to carry out control operations before locust populations and groups form swarms (AELGA, IRLCO-CSA)

Armyworm larvae were reported attacking maize, sorghum, sugarcane and grazing land in several districts in the Rift Valley Province in **Kenya** in February. Control operations were carried out by the affected farmers with technical and material assistance by the Ministry of Agriculture. Armyworm caterpillars were also reported attacking paddy rice in **Zanzibar, Tanzania**

Forecast: The armyworm season has come to an end in the southern outbreak

region and more outbreaks are not expected in the coming months, however, the pest will continue posing a threat to small-grain crops and pasture in **Kenya, Tanzania**, perhaps **Ethiopia**. Countries in the armyworm migration route are advised to maintain vigilance and monitor the pest. Community forecasters are advised to engage in monitoring and reporting armyworm sightings and preventive interventions are recommended to the extent possible (AELGA, DLCO-EA, and IRLCO-CSA).

Quelea outbreaks were reported in Chokwe district, Ghaza Province in **Mozambique** in February. Breeding is expected to have commenced in **Tanzania, Zimbabwe** and other countries where the bird will likely pose a threat to rain-fed and irrigated crops (AELGA, IRLCO-CSA).

Forecast: Quelea birds will likely pose a threat to irrigated rice in several districts in the Rift Valley Province of **Kenya** and in other countries in the region (AELGA, IRLCO-CSA).

Rodents: Rodents pose a threat to oil palm crops in **Thailand** where barn owls (*Tyto alba*) are being used to control the pest (OFDA).

No updates were received on other **ETOPs** in February, but some activities may have commenced and continue into the forecast period in CAC countries.

OFDA's Assistance for Emergency Locust and Grasshopper Abatement (AELGA) will continue monitoring

the situation and issue advice. End summary

This and other SITREPS can be accessed on our website at:

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

Weather and ecological condition

Most of the DL outbreak areas remained fairly dry with the exception of spring breeding areas in southeastern **Iran** where moderate rains fell in February. Light rain was reported in Bikaner and Jodhpur in Rajasthan and in Saurashtra, **India** during the last week of February. Above normal rainfall was recorded in February in some areas in central **Ethiopia**, much of **Uganda** and the adjacent region, much of **Zambia** and **Mozambique**, parts of **Botswana**, parts of South Africa. Rain continued in February in all locations near Red Locust outbreak areas in **Malawi**, **Mozambique**, **Tanzania** and **Zambia**. Partial flooding occurred in Buzi and Dimba plains in **Mozambique**, North Rukwa and Wembere plains in **Tanzania** towards the end of the month, but unlikely to affect successful breeding.

During the last week of February, rainfall was above average over much of **Uganda** and neighboring region, much of central **Mozambique**, much of **Zambia**, parts of northern **Zimbabwe**, parts of **Botswana**, and southern part of **South Africa**. **Libya** experienced mild weather with maximum temperatures ranging from 13-31 degrees Celsius and minimum temperatures from 10-15 degree C, but no rain was reported. In **Sudan**, winter breeding areas along the Red Sea coast and the hinterland experienced mild weather with low to medium cloud covers, but precipitation was far below

average and breeding conditions continued deteriorating (NOAA, DDLC/Libya, DPPQS/India, CNLA/Niger, FAO-DLIS, IRLCO-CSA, PPD/Ethiopia ad PPD/Sudan).

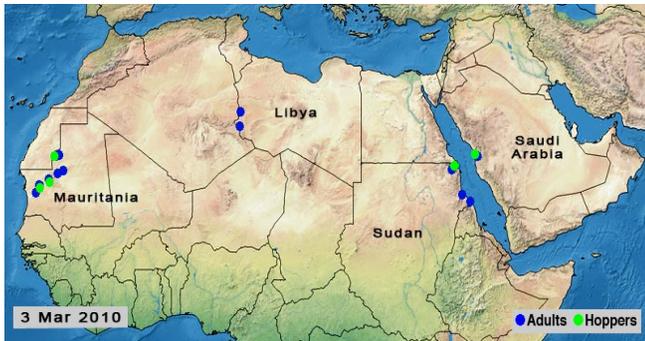
(Note: Changes in the weather pattern and the shift in the landscape are believed to increase the risk of pest outbreaks. Regular monitoring and reporting are essential at all times. End note).

DETAILED ACCOUNTS OF ETOP SITUATION AND RELATED ACTIVITIES

DL - Western Outbreak Region

A few scattered adult locusts were detected in northern **Mauritania**. A similar situation may exist in the Air Mountains in northern **Niger**, the Adrar in northern **Mali** where surveys were undermined by the security situation. Isolated solitary adults were seen in five places in wades in Ghat area and scattered solitary adults were seen copulating and laying in "tita Ghsin" in southwestern **Libya** during surveys that were carried out from February 26-28. No locusts were reported in other countries in the region.

Forecast: The DL situation will likely remain fairly calm in the western outbreak areas during the forecast period. Only some scattered adults will likely persist in wades in Ghat area where small-scale breeding may occur and hatching may be seen in mid-to late March in areas where ecological conditions remain favorable. Small-scale breeding may also occur in spring breeding areas in northwest Africa provided that rains fall during the forecast period. Significant developments are expected during the forecast period (CNLA/Mauritania, CNLAA/Morocco, DDLC/Libya and FAO/DLIS).



(Locust numbers remained low in February, source: FAO-DLIS, 3/10)

DL - Central Outbreak Region

The DL situation remained relatively calm in the Central region in February. Only low density solitary adults and 3rd to 5th instar hoppers were detected in some 120 ha in **Sudan** during ground surveys that covered more than 18,400 ha in winter breeding areas. Surveys were conducted in Tokar Delta, the southern coastal areas near Eritrean border, between Tokar and Suakin, the northern coastal areas (in *Adreem* and *Osailf*) and west of the Red Sea hills (PPD/Sudan). No locusts were reported in eastern **Ethiopia** where moderate rains were recorded in February and in **Yemen, Oman, Somalia** or **Eritrea**.

Forecast: Unless rains fall in the coming weeks and ecological conditions begin improving, locust numbers will continue declining and the situation will remain calm along the Red Sea coasts, the Gulf of Aden and other countries in the region during the forecast period (AELGA, FAO-DLIS, PPD/Ethiopia, and PPD/Sudan).

DL- Eastern Outbreak Region

Locusts were not reported in February in spring breeding areas along the **Iran-Pakistan** borders and no locusts were detected during surveys carried out in Jodhpur, Jaisalmer, Barmer, Bikaner, Phalodi, Jalore, Nagaur, Suratgarh, Churu,

Bhuj and Palanpur of the Scheduled Desert Area of Rajasthan and Gujarat States (DPPOS/India, FAO-DLIS).

Forecast: Ecological conditions are expected to improve during the forecast period and locusts will begin appearing and perhaps breeding on a small-scale in spring breeding areas along the **Iran-Pakistan** border where rains fell in January and again in February. However, significant developments are not likely during the forecast period (DPPQS/India, FAO-DLIS).

Central Asia and the Caucasus

No updates were received on locusts in the CAC at the time this report was compiled. However, some activities are likely during the forecast period in the outbreak areas.

Far East: Rodents pose a threat to oil palm crops in **Thailand** where barn owls are being bred and used as biological control agents (OFDA/RDMA).



Barn owl (*Tyto alba*)

Red Locust: Groups of medium density hopper bands (30-40 insects/sq m) persisted in February in grassland in Rukwa Valley in **Tanzania** (see picture) where close to 3,000 ha were infested during surveys carried out by IRLCO-CSA and MoA/Tanzania. The hoppers were first detected in January. Various density hoppers were expected in the Ikuu-Katavi plains, South Rukwa plains and Malagarasi basin in **Tanzania**, in Buzi and Dimba plains in **Mozambique** and Kafue Flats in **Zambia** where significant parental populations were detected at the onset of

the rains in late last year. Partial flooding was reported in the North Rukwa plain, Wembere plain in **Tanzania**, Buzi and Dimba plains in **Mozambique**. However, it is not expected to affect breeding in these areas since hatching had already occurred and hoppers can climb up tall grasses and rise above flood levels.



(Red locust hoppers on grass stems in North Rukwa plain, Tanzania, source: IRLCO-CSA, 3/10)

Forecast: Hoppers are expected to fledge and form immature adults in most of the outbreak areas during the forecast period. IRLCO-CSA plans to carry out aerial and ground surveys in the outbreak areas and launch control in high density locust population areas (AELGA, IRLCO-CSA)

Armyworm: Armyworm larvae were reported in maize, sorghum, sugarcane and grazing land in Rongai, Nakuru, Mogotio, Kericho and Narok districts of Rift Valley Province in **Kenya** in February. Control was carried out by affected farmers with technical and material assistance, including pesticides and sprayers provided by MoA. In **Kenya**, armyworm was first reported in December in coastal areas in Tana River, Machakos, and Taita–Taveta where it was seen attacking crops and pasture (DLCO-EA, IRLCO-CSA). In **Tanzania**, armyworm caterpillars were detected attacking some 900 ha of paddy rice in Zanzibar in February. Other parts of the country remained fairly

calm, but positive trap catches were seen in several districts in northern and central north parts of the country (DLCO-EA).

Forecast: Armyworm will likely continue being a threat to crops and pasture in the northern outbreak areas in the **Kenyan** highlands, the coastal and northern parts of **Tanzania** and perhaps in the southern and the Rift Valley regions of **Ethiopia**. Countries in the armyworm migration route are advised to maintain vigilance and regular monitoring. Armyworm outbreaks are not expected in the southern outbreak areas in **Malawi**, **Mozambique**, **Zambia** and **Zimbabwe** in the coming months. Trap operators are advised to report moth catches on a timely basis. Outbreak countries are encouraged to share armyworm information with neighboring countries as often as possible. Community forecasters are advised to engage in monitoring and reporting armyworm sightings. Preventive interventions are recommended to the extent possible. (AELGA, IRLCO-CSA).

Quelea bird: Outbreaks were reported in Chokwe district, Ghaza Province in **Mozambique** in February. Breeding is expected to have commenced in **Tanzania**, **Zimbabwe** and other countries where the birds will likely pose a threat to rain-fed and irrigated crops (IRLCO-CSA).

Forecast: Quelea birds will likely pose a threat to rice in Mwea irrigation Scheme in Kirinyaga, Siaya, Bondo and Kisumu districts in the Rift Valley Province of **Kenya** and in other countries in the region. In **Mozambique**, plans are underway to carry out ground surveys to locate *Quelea* roosts (IRLCO-CSA).



Facts: Quelea birds can travel ~100 km/day looking for food. Each bird can consume 3-5 g of grain and perhaps destroy about the same amount each day. A colony of up to 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/day).

The Timor and South Pacific

No update was received in February, but it is likely that grasshoppers and locusts are becoming active.

Australian Plague Locust

A number of swarms were detected in the Far Northwest of New South Wales and some of which migrated from Southwest Queensland to the Far North of South Australia in February. Swarms were also detected in the Far Southwest, and New South Wales. Widespread heavy rains that fell during the first two weeks of February triggered massive egg laying in these regions (APLC).

Forecast: High density hopper populations will likely develop and form bands in several regions of New South Wales from late February on and in parts of the Far North of South Australia and Southwest Queensland in March. Should large numbers of the hoppers survive and fledge, widespread swarm infestations will occur in several

states in April and lead to autumn egg laying in cropping regions of New South Wales and South Australia thereafter (APLC).



(Australian plague locust, source: APLC)

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 and ELOs are encouraged to continue sharing information with partners and other stakeholders as often as possible.

Pesticide Stocks

Control operations were not carried out in February and pesticide inventories remained unchanged in all countries during this period. It is worth noting that some of the pesticides listed below may have expired or will soon expire. Conducting quality tests can help determine the efficacy of these stocks and whether they should stay or go.

In light of the fact that considerably large stockpiles exist in ETOP-prone regions, countries need to begin exploring options to put these products to a good use before they become obsolete and turn into a huge liability. Several options, including pesticide triangulation can be considered as part of an integrated approach to address this problem as part and parcel of pesticide stewardship networking whereby pesticide delivery systems can be strengthened and improved at the national and regional levels.

Country	Quantities in l/kg
Algeria	1,800,000~
Chad	108,085~
Eritrea	44,800~
Ethiopia	22,800
Mali	209,000%~
Mauritania	480,000~@
Morocco	4,105,300~
Niger	26,920+
Senegal	519,000~
Saudi Arabia	Not available
Sudan	702,378 ^m
Tunisia	167,600~
Yemen	??info not available

~ data not necessarily current
 % 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
^m This quantity includes EC, ULV and Dust formulations available for all crop protection uses, including ETOPs

DL	Desert Locust
DLCO-EA	Desert Locust Control Organization for Eastern Africa
DPPQS	Department of Plant Protection and Quarantine Services
DPV	Département Protection des Végétaux
ELO	EMPRES Liaison Officers
EMPRES	Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases
ETOP	Emergency Transboundary Outbreak Pests
IRIN	Integrated Regional Information Networks
IRLCO-CSA	International Red Locust Control Organization for Central and Southern Africa
ITCZ	Inter-Tropical Convergence Zone
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)

List of Acronyms

AELGA	Assistance for Emergency Locust Grasshopper Abatement	MoAFSC	Ministry of Agriculture, Food Security and Cooperatives
APLC	Australian Plague Locust Commission	MoARD	Ministry of Agriculture and Rural Development
CAC	Central Asia and the Caucasus	NOAA	National Oceanic and Aeronautic Administration
CERF	Central Emergency Response Fund	OFDA	Office of U.S. Foreign Disaster Assistance
CLCPRO	Commission de Lutte Contre le Criquet Pélerin dans la Région Occidentale	PPD	Plant Protection Department
CNLA/CNLAA	Centre National de Lutte Antiacridienne	PPSD	Plant Protection Services Division/Department
CRC	Commission for Controlling Desert Locust in the Central Region	PRRSN	Pesticide Risk Reduction through Stewardship Network
DDLCC	Department of Desert Locust Control	TAG	Technical Assistance Group
		USAID	United States Agency for International Development

Point of Contact:

To teach more about our activities, including the programs we support and many more, please, visit our website:

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

You can also send an e-mail to:

Yeneneh T. Belayneh, Ph. D.
ybelayneh@ofda.gov