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

Summary

The **Desert Locust** (**SGR[1]**) activities continued increasing in December in Sudan. Escapee adults moved from the interior of the country to the northeast and the Red Sea coast where egg laying and hopper developments continued. Small-scale breeding was reported in southeast Egypt. Some hopper groups and bands were formed on the Red Sea coast of Yemen. Locust numbers slightly increased in northwest Mauritania where hopper groups and adults were controlled on close to 2,700 ha. Small-scale breeding also occurred in northern Mali where control operations treated 850 ha and in northern Niger. Locust numbers declined along the Indo-Pakistan border. Other countries remained relatively calm during this period (DDLC/Libya, DLMCC/Yemen, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia and PPD/Sudan).

Forecast: Locust numbers will increase further along both sides of the Red Sea coast during the forecast period and form small hopper bands and groups as well as swarms, particularly in Sudan. Other countries will likely remain calm during the forecast period. Nevertheless, active surveillance and monitoring are recommended to avoid any surprises (AELGA, DDLC/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia, PPD/Sudan).

Other ETOPs

Red Locust (NSE): Aerial surveys covered 237,000 ha in December in Wembere, Ikuu-Katavi and Lake Rukwa plains as well as Malagarasi Basin in Tanzania. Some 43,100 ha were detected as potential breeding grounds. Isolated low-density adult populations were detected in parts of the outbreak areas. Hatching will commence in January and hoppers and bands will develop during the forecast period (IRLCO-CSA).

Note: *A pilot project on community-based locust monitoring and reporting was launched in Kafue Flats, Zambia in June 2010. The project involves farmers, fishermen and cattle herders to provide locust information to IRLCO-CSA. Information obtained through the initiative will be analyzed and used to plan surveys and control operations.* ***End note.***

Moroccan (DMA), **Italian (CIT)** and **Migratory (LMI)** locusts: No update was received on these ETOPs at the time this report was compiled.

Madagascar Migratory Locust (LMC): Delays in spring rains affected locust breeding leading to slow development and reduced breeding. Low density hoppers were detected during the first dekad of November. The first generation hatching was observed in Manja and Ranohira and elsewhere, 4th and 5th instar hoppers were detected in December. In the center and south of the Horombe plateau, 4th and 5th instar and immature adults were observed. 3rd to

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

5th instar hoppers were sighted in north Horombe and a good percentage of dead adults from fungal infections and parasitism by Asalides were found. In Vineta plateau, low density hoppers (10 to 160 individuals/ha) were observed. Hopper development continued in the Ankazoabo (FAO-CNA bi-weekly. The first bi-weekly update was launched on October 13).

Forecast: Locust populations will further develop and disperse to the south and southwest to Bakily-Fotadrevo and other areas of the region. Reproduction will continue during forecast period. Active surveillance and monitoring are essential.

The United States Agency for International Development through the Office of US Foreign Disaster Assistance has responded favorably to an appeal issued by the UN/FAO on behalf of the GoM. European Commission, Switzerland and France have also pledged assistance. It is anticipated that other donors and partners will follow suit.

African migratory locust (LMM): No new information was received at the time this report was compiled.

Armyworm (AAW): African armyworm outbreaks were reported in Newala and Masasi districts of Mtwara Region, Tanzania. The pest was reported feeding on maize and pasture. There is a likelihood of AAW outbreaks continuing in Mtwara and extend to Malawi during the forecast period. Trap operators, including community-based forecasters are urged to stay alert and report moth catches to the appropriate personnel and alert community members (AELGA, DLCO-EA, IRLCO-CSA).

Tree locust (AME): No new information was received at the time this report was compiled.

Quelea (QQU): QQU bird outbreaks were reported in Siaya and Kisumu districts of Kenya where the birds were seen damaging irrigated rice. Control operations were carried out by Crop Protection Division of the Ministry of Agriculture in collaboration with Desert Locust Control Organization for Eastern Africa (IRLCO-CSA).

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 train staff and technicians to prevent and respond to DL outbreaks and invasions and avoid the threats they pose to vulnerable communities.

The overhaul of the CNLAs is all four countries is considered a significant improvement over the condition they were at during and prior to the 2003-05 upsurges. It is worth mentioning that the *CNLAs have been able to effectively avert a potentially devastating DL outbreak that began developing in* ***Mauritania*** *in 2009*.

OFDA ETOP Activities

- OFDA/TAG continues its initiatives in pesticide risk reduction 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 so far 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 and pesticide disposal programs through FAO to mitigate, prevent and respond to DL emergencies and associated human health risks and environmental pollution.

- 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 its support for 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

During the second dekad of December, dry conditions prevailed across much of East Africa sustaining moisture deficits in many regions including eastern Kenya and Tanzania. In southern Africa rainfall was below average along the east and west coast of Madagascar, northern Mozambique, and eastern Zambia. However, heavy rains soaked southern Zimbabwe, most areas in the Maize Triangle of South Africa, parts of Botswana, northeastern Namibia, and much of Angola (NOAA). Rainfall also continued in NSE outbreak areas in Tanzania, Malawi, Mozambique and Zambia (IRLCO-CSA).

Extended weather forecast for southern Africa predicts localized above average rainfall over parts of northern Mozambique, southern Malawi, and parts of eastern South Africa from Dec-Feb. Northwestern Mozambique, central Malawi, and some areas over southern Mozambique and western South Africa will likely experience below average rainfall (NOAA).

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 and weather conditions across various regions are presented below.

SGR - Western Outbreak Region

The **Desert Locust (SGR):** Locust numbers increased in northwestern Mauritania where small-scale breeding continued and ground control treated close to 2,700 ha during the reporting period. Adult locust also moved to the northern part of the country. Low numbers of adults were detected in southern and eastern Algeria and controlled on 410 ha. Control operations treated some 850 ha in northern Mali where small-scale breeding occurred. Small-scale breeding also occurred in northern Niger. A few scattered isolated adults were detected during surveys carried out in northwestern and western Libya. No locusts were reported elsewhere in the region (DDLC/Libya, FAO-DLIS and INPV/Algeria)

Forecast: Small-scale breeding will likely continue in northwestern Mauritania and commence in the north and form groups during the forecast period. A similar situation will likely develop in adjacent areas in Morocco and low numbers of adults will likely persist in northern Mali and Niger as well as eastern, central and southern Algeria. Other countries will likely remain calm during this period (DDLC/Libya, FAO-DLIS and INPV/Algeria).

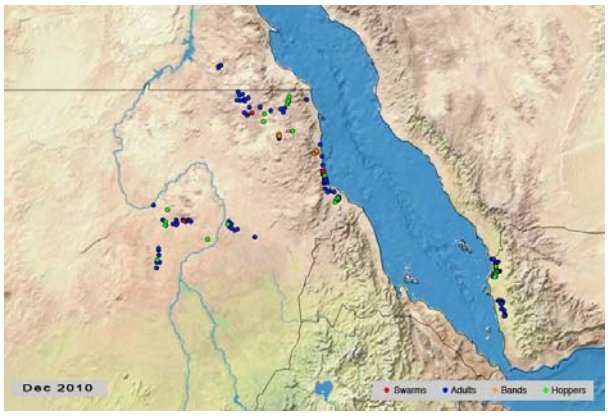
SGR - Central Outbreak Region

Increased SGR activities continued in December in Sudan. Adult groups and swarms moved from the summer breeding areas in the interior of the country to the winter breeding areas in the northeast and the Red Sea coast where egg laying and hatching continued. Swarms, gregarious groups and hoppers/bands were scattered over some 40,000 ha and aerial and ground control treated close to 5,000 ha in December. Small-scale breeding occurred in southeastern Egypt. Swarms that crossed the Red Sea and reached northwestern coast of Saudi Arabia laid eggs and dispersed. Small-scale breeding occurred on the Red Sea coast of Yemen where control operations treated close to 1,050 ha. No locusts were reported in other countries in the region (DLMCC/Yemen, FAO-DLIS, PPD/Ethiopia, PPD/Sudan)

Forecast: Breeding will continue in Sudan, Saudi Arabia and Yemen and likely form small swarms, groups and hoppers and bands in these areas during the forecast period. ***Intensive surveys and monitoring as well as preventive interventions are highly recommended in the coming months.*** Other countries in the region will likely remain calm during the forecast period (DLMCC/Yemen, FAO-DLIS, AELGA, PPD/Ethiopia and PPD/Sudan).

SGR - Eastern Outbreak Region

Locust numbers declined in December in the summer breeding areas along the Indo-Pakistan borders where control operations treated some 600 ha in Pakistan. Dry conditions also contributed to the decline in locust numbers (DPPQS/India, FAO-DLIS).



(locust activities in December, FAO-DLIS, 01/11)

Forecast: Escapee adults will likely move to the spring breeding areas in Baluchistan in western Pakistan where small-scale breeding will likely occur with the onset of the spring

Red Locust (NSE): Aerial surveys were carried out from 1 to 10 December in Wembere, Ikuu-Katavi and Lake Rukwa plains as well as Malagarasi Basin in Tanzania by IRLCO-CSA and the MoA in December. Isolated low-density parental populations were detected in parts of the outbreak areas. Some 237,000 ha were surveyed and close to 43,100 ha were determined as potential breeding grounds. Breeding may have begun in the outbreak areas in Malawi, Mozambique and Zambia where ecological conditions continued improving with the onset of the summer rains that started in November (IRLCO-CSA).

Adult NSE mating/laying eggs in Ikuu plains, Tanzania; 4th December, 2010 (IRLCO-CSA)

Forecast: Hatching will commence in January and form hoppers in the outbreak areas where low to medium density hopper bands are likely to form in outbreak areas where significant residual adult populations were present before the onset of the rains in Ikuu-Katavi, North Rukwa and Wembere plains and Malagarasi Basin in Tanzania; Buzi and Dimba plains in Mozambique; and Kafue Flats in Zambia. IRLCO-CSA will carry out survey and control where high density hopper bands will be located. Green Muscle will be used in ecologically sensitive areas (IRLCO-CSA).

Madagascar Migratory Locust (LMC): Surveys continued in December and low density hoppers (200-700 individuals/ha) were detected during the first dekad of the month. In the primary outbreak areas, first generation hatching was observed in Manja and Ranohira and elsewhere, 4th and 5th instar hoppers were detected. In the center and south of the Horombe plateau, 4th and 5th instar hoppers at densities varying from 100 to 4,000 individuals/ha and 70 to 200 solitary-transient immature adults/ha were observed. In north Horombe, 100 to 1,100/ha 3rd to 5th instar hoppers were sighted. Some 10% of solitary mature and immature adults infected by fungal diseases and a parasitoid (Asalides) were found dead west of Isalo in north Horombe at densities varying from 200-700 individuals/ha. In the plateau Vineta hoppers at densities varying from 10 to 160 individuals/ha were observed and continued to develop in December. Hopper development continued in the Ankazoabo (FAO-CNA bi-weekly).

Forecast: Following the rains that fell in November and December, locust populations will disperse to the south and southwest to Bakily-Fotadrevo and other areas in the region. Reproduction continued during the second and third dekads and requires intense survey and monitoring.

CNA and DPV must remain vigilant and continue monitoring areas where egg laying is believed to have occurred or will likely occur and report and respond to any intervention activities 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.

African migratory locust (LMM): No new information was received at the time this report was compiled.

Moroccan (*DMA*)**, Italian** (CIT) and Migratory (LMI) locusts in CAC. No update was received on these pests at the time this report was compiled.

(locust prone CA countries, FAO)

Australian Plague Locust (APL): No update was available on APL at the time this report was compiled. However, it is likely that the locust season was intense and activities continued. It is no likely that the torrential rains reported in the past weeks have affected the locusts as most of the rains were outside the locust zone.


(Australian plague locust, source: APLC)

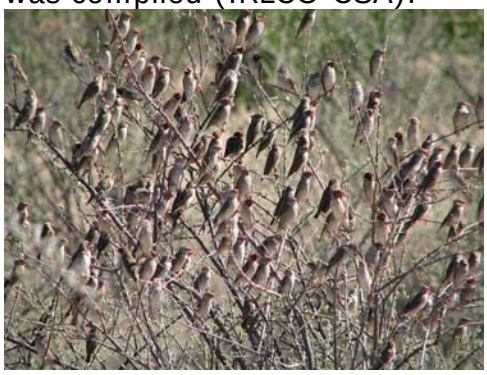
Forecast: Locust activities will likely continue, but at a reduced rate given the previous decline in populations and from the intensive control interventions undertaken (AELGA).

The Timor and South Pacific: No update was received in December.

African Armyworm (**AAW**): AAW outbreaks were reported in Newala and Masasi districts of Mtwara Region, Tanzania. The caterpillars were reported feeding on maize and pasture. No infestations were reported in other countries in the region, but there is a likelihood of AAW outbreaks continuing in Mtwara, Tanzania and extend to Malawi during the forecast period. Nevertheless, trap operators, including community-based forecasters are urged to stay alert and report moth catches to the appropriate personnel and alert community members (AELGA, DLCO-EA, IRLCO-CSA).

Forecast: AAW infestations will likely continue in Tanzania and may begin appearing in Kenya during the forecast period. Trap operators, including community-based forecasters, where applicable, are advised to remain vigilant and report moth catches to the appropriate personnel and members of the communities (AELGA, IRLCO-CSA).

Quelea (QQU): QQU bird outbreaks were reported in Siaya and Kisumu districts of Kenya where the birds were seen damaging irrigated paddy rice. Control operations were carried out against three roosts by Crop Protection Division of the Ministry of Agriculture in collaboration with DLCO-EA and were in progress at the time this report was compiled (IRLCO-CSA).


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

Forecast: QQU birds will likely be a problem to small grain cereal growers in Kenya,

Tanzania and Mozambique. Crop protection staff, field agents and other partners are advised to remain vigilant, report and respond to any threats in a timely fashion (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 at the time this report was compiled, but the pest remains a threat to both pre- and post-harvest crops and produces. *A large number of raptor birds such as barn owl, Tyto alba and other animals are nature's biological control agents of rodents.*

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 limited control operations launched in Algeria, Mauritania, Mali, Niger, Sudan and Yemen, pesticides stocks did not change much in December. The likelihood of some of the pesticides listed in the below box becoming obsolete increases with time. Mindful of this phenomenon, ETOP-prone countries, particularly those with large stocks and 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.

Judiciously executed triangulations of stocks from countries with large inventory to where the need exists due to imminent threats from ETOP invasions is a double-edged alternative that is worthwhile considering.

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

Country	Quantities in l/kg[$]
Algeria	1,800,000~
Chad	108,085~
Eritrea	44,800~
Ethiopia	15,780
Libya	Data not available
Madagascar	109,000
Mali	209,000%~
Mauritania	479,,576~@
Morocco	4,104,997~
Niger	28,240+
Senegal	519,000~
Saudi Arabia	Date not available
Sudan	873,964"
Tunisia	167,600~
Yemen	40,500 + 527 kg GM

$These quantities include ULV, EC and dust formulations
~ 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-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

List of Acronyms

AAW	*African armyworm (Spodoptera expempta)*
AELGA	*Assistance for Emergency Locust Grasshopper Abatement*
AME	*Anacridium melanorhodon*
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)*
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*

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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