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

Summary

The **Desert Locust** (**SGR[1]**) activities increased in November in Sudan where ground operations controlled various instar hopper bands and adult groups in more than 6,900 ha in the Northern, the River Nile, Khartoum and Red Sea States. Some adults moved to the northeast of the country and laid eggs while a few crossed the Red Sea and reached northeastern coast of Saudi Arabia on November 30th. Breeding continued in northwestern Mauritania where control operations treated 400 ha. Gregarious adults were confirmed in northern Mali and a similar situation may be present in adjacent areas in Niger where survey operations could not be done due to security situation. Scattered adults persisted in Chad and in Algeria. Ground control treated adults on 8 ha in northern Oman. Locust activities continued along the Indo-Pakistan borders where control operations treated more than 4,530 ha in November. Other countries remained calm during this period (DDLC/Libya, DLCO-EA, DPPQS/India, DLMCC/Yemen, FAO-DLIS, INPV/Algeria, PPD/Ethiopia and PPD/Sudan).

Forecast: Swarms will likely form in the interior of Sudan and move to the coast, hatching will likely occur in the northeast and locust numbers will increase along the coast during the forecast period. Saudi Arabia and Yemen will likely experience small-scale breeding along the coast during this period. Locust numbers will continue declining along the Indo-Pakistan borders, however, escapee adults will likely move to western Pakistan in the coming months. Active surveillance and monitoring must be maintained in these countries to avoid unexpected surprises. Other countries will likely remain calm during the forecast period (DDLC/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia, PPD/Sudan).

Other ETOPs

Red Locust (NSE): The NSE situation remained relatively calm in November. Only low density populations persisted in the primary outbreak areas in Ikuu-Katavi and Malagarasi basins and Wembere plain in Tanzania, Lake Chilwa/Lake Chiuta in Malawi/ Mozambique, Kafue Flats in Zambia and Buzi-Gorongosa in Mozambique. Mating and egg laying is expected to have started in areas that received significant amounts of rain in November (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

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

was received on these ETOPs at the time this report was compiled.

Madagascar Migratory Locust (LMC): In Madagascar, unpredicted delays in spring rains affected locust breeding leading to low density solitary and transient hoppers and bands of late instar hoppers and fledglings in November. Control operations treated 1,000 ha on 28 November north-west of Ihosy. Bi-weekly locust updates continued.

The United States Agency for International Development through its 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 to the country. It is anticipated that other donors and partners will follow suit.

African migratory locust (LMM): Solitary populations of LMM were detected in sugar cane field in Chiredzi District in Zimbabwe (IRLCO-CSA).

Armyworm (**SEX**): SEX activities were not reported in the primary outbreak areas in November. However, moths will likely begin appearing and lay eggs following the rains. 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): An AME invasion was controlled on 8,000 ha in November in Turkana District in Kenya.

Quelea (QQU): QQU birds were controlled in Nyaahururu and reported in Mwea Districts of Kenya. Survey operations continued in other areas (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 November, precipitation declined over much of the SGR outbreak areas in West Africa. Rainfall was below average in the northern parts of Madagascar and over most areas in central and eastern Africa, but moderate to adequate in the NSE outbreak areas, Botswana and South Africa. During the second week of November, pockets of areas in Ethiopia, southern Uganda, and northwestern Tanzania received above average rain. In southern Africa, rainfall was below average in southern Tanzania, Madagascar, northern Mozambique, eastern Zambia, and much of Angola. Rainfall was above average over parts of Zimbabwe, Botswana, and southern Mozambique (NOAA).

Extended weather forecast for southern Africa indicates 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 and activities as well as ecological and weather conditions across various regions are presented below.

SGR - Western Outbreak Region

The **Desert Locust (SGR):** In northern Mauritania, locust numbers slightly increased formed concentrations and groups were formed. Ground control treated some 400 ha in November. Gregarious adults were

reported in northern Mali and a similar situation may have existed in adjacent areas in Niger, but could not be confirmed due to a lack of access. Scattered adults were reported in northeastern Chad and the Sahara region in Algeria. No locusts were reported in other countries in the region (DDLC/Libya, FAO-DLIS and INPV/Algeria)

Forecast: Adult locusts from central and western Mauritania move to northern and northwestern and breed. Adult locusts may also move from northern Niger and Mali to central and southern Algeria during the forecast period. Other countries will likely remain calm during this period (DDLC/Libya, FAO-DLIS and INPV/Algeria).

SGR - Central Outbreak Region

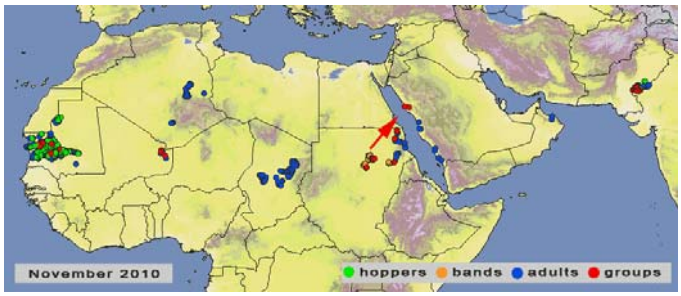
SGR activities increased in November in Sudan where ground control operations treated more than 6,909 ha against various instar hopper bands and adult groups in the Northern, the River Nile, Khartoum and Red Sea States. Some adults moved to the northeast of the country where they laid eggs while others crossed the Red Sea and reached northeastern coast of Saudi Arabia on November 30th. In northern Oman, adult locusts were controlled on 8 ha during this period.

Forecast: In Sudan, small swarms will likely form in the interior and move to the coast during the forecast period. Hatching will likely occur in the northeast and numbers will increase along the coast during this time. The coasts of Saudi Arabia and Yemen will likely experience small-scale breeding during the forecast period. Routine survey and monitoring are essential to avoid any surprises. Other countries will likely remain calm during the forecast period. (DLCO-EA, DLMCC/Yemen, FAO-DLIS, AELGA, PPD/Ethiopia and PPD/Sudan).

SGR - Eastern Outbreak Region

Locust activities continued along the Indo-Pakistan borders where control operations treated more than 4,530 ha in November. Scattered adults were reported in several places in Jaisalmer district and controlled on some 370 ha in November (a total of 4,700 ha have been treated in India since the beginning of control operations began this season). In Pakistan, some 4,160 ha were treated against groups of adults and hoppers during this period and a total of 9,204 ha were treated since October 16) (DPPQS/India, FAO-DLIS).

Forecast: Locust numbers will continue declining along the Indo-Pakistan borders due to timely control operations and unfavorable ecological conditions. Nevertheless, escapee adults and small swarms will move to spring breeding areas in western Pakistan during the forecast period (FAO-DLIS).



(locust activities in November, FAO-DLIS, 12/10)

Red Locust (NSE): The NSE situation remained fairly calm in November. Only low density populations persisted in the primary outbreak areas in Ikuu-Katavi and Malagarasi basins and Wembere plain in Tanzania, Lake Chilwa/Lake Chiuta in Malawi/ Mozambique, Kafue Flats in Zambia and Buzi-Gorongosa in Mozambique. Mating and egg laying is expected to have started in

areas that received significant amounts of rain during November (IRLCO-CSA).

Forecast: Egg laying may have started in areas where rainfall occurred and will likely continue and hoppers will begin appearing during the forecast period. Extensive breeding is expected in Ikuu-Katavi, Malagarasi and Wembere, particularly in ecological sensitive areas. Hopper bands will likely appear in Kafue flats where an estimated 3,500 ha was reported infested with low density populations in October. There is also a high probability of hopper band formation in Lake Chilwa/Lake Chiuta plains (Mozambique and Malawi) and Buzi and Dimba plains (Mozambique). Survey operations will commence in the coming days (IRLCO-CSA).

Madagascar Migratory Locust (LMC): Aerial surveys commenced in mid-October in the outbreak areas and continued from the primary operational base in *Ihosy* in *Horombe Plateau (the* base was established with the assistance of FAO). Ground surveys are being launched by CNA to augment aerial operations with two helicopters. Operations are being executed as per the action plan developed by FAO and CNA.

An unpredicted delayed rainfall affected locust developments and breeding. Only low density solitary and transient hoppers and instars were reported in patches of green vegetation during surveys carried out in the first and second dekads of November. By the third dekad, groups and bands of late instar hoppers and fledglings were detected. Control operations treated 1,000 ha on 28 November north-west of Ihosy. The bi-weekly situation updates for the GoM, donor communities and other partners continued (FAO and CNA launched the first bi-weekly update on October 13).

As part of its humanitarian assistance, the United States Agency for International Development through the office of Foreign Disaster Assistance responded favorably to the appeal issued by the UN/FAO on behalf of the GoM. It is anticipated that other donors and partners will follow suit.

Forecast: With ecological conditions improving and hoppers forming bands and fledging, breeding will likely continue and escalate during the forecast period. Should that be the case, locust numbers will likely increase and require large-scale control interventions through mid-2011 to minimize and prevent the damage the pest can cause to crops and pasture and thereby affect food security and livelihoods of vulnerable communities.

CNA and DPV must remain active 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): Solitary populations of LMM were detected in sugar cane field in Chiredzi District in Zimbabwe. It is to be recalled that the pest was reported on sorghum and pasture in Humera area in northwestern Ethiopia and Shinile and Jijiga Zones in the Somali region of Ethiopia (DLCO-EA).

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): Large-scale fledging gave rise to increased number of adults in November in many areas in New South Wales, eastern South Australia and northwest Victoria. High density nymphs and hopper bands persisted in the Central West, Riverina and Far Southwest regions of New South Wales, the Northeast and Murray Valley in South Australia, and Northwest and North Central regions of Victoria throughout November. Control operations were launched by landholders, GoA biosecurity agencies, local government and APLC. Swarm formation occurred in several regions of New South Wales and Northwest Victoria during this period.


(Australian plague locust, source: APLC)

Forecast: Increased swarm activities and egg laying in the Riverina and Far Southwest New South Wales, and in Northwest and North Central Victoria are expected. The threat of plague formation across all infested regions during summer has declined due to population reductions in several regions. Large-scale summer breeding is likely, but less than that of spring. Adult populations and swarms will migrate, redistribute and eventually begin egg laying in some regions during December (APLC).

Tree locust (*Anacridium melanorhodon melanorhodon* (AME): An AME outbreak occurred in Turkana District of Kenya where control operations treated some 8,000 ha in November.

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

Armyworm (**SEX**): SEX activities were not reported in the IRLCO-CSA or DLCO-EA member-countries in November.

Forecast: SEX moths will begin appearing and laying eggs in the southern and eastern outbreak regions following the seasonal rains. 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 as soon as possible (AELGA, IRLCO-CSA).

Quelea (QQU): QQU birds were reported in Nyaahururu and Mwea Districts of Kenya and control operations were carried out in Nyaahururu. Survey operations continued in other areas (DLCO-EA, IRLCO-CSA).


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

Forecast: QQU breeding is expected to begin 4-9 weeks after the start of the rains. Monitoring of breeding colonies should begin at the time small grain cereal crops start to mature (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 India, Pakistan and Mauritania, control operations were not conducted elsewhere and pesticide inventories remained unchanged for the most part during this time.
The likelihood of some of the pesticides listed in the below box becoming obsolete increases as time goes by. Mindful of this, ETOP-prone countries, particularly those with large stocks, are encouraged to regularly test their stocks and determine whether they should retain, use, share or discard them immediately. All options should be explored to avoid huge environmental and financial costs associated with handling and disposing 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 as well as 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	17,280
Libya	Data not available
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

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*
SEX	*Spodoptera exempta*
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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