

**Emergency Transboundary
Outbreak Pest (ETOP) Situation
Report for January with a
Forecast till mid-March, 2012**

Summary

The desert locust (*SGR*¹) situation remained relatively calm in January. Only limited breeding occurred in southwest Libya where groups of gregarious hoppers were detected and in southeast Algeria where scattered adults were controlled in 85 ha. Small-scale breeding was in progress in the Air Mountains and on the western side of the Ténéré Desert in Niger and low numbers of hoppers and adults are currently present. Locust numbers declined over most of the western region due to unfavorable conditions. Scattered adults were reported in the Tokar Delta and southern plains near Aqiq and Aiterba in Sudan and near Qunfidah in Saudi Arabia, but in general, the numbers remained unusually low in the winter breeding areas along both sides of the Red Sea and Gulf of Aden due to poor rains and dry conditions. A few adults were reported in spring breeding areas in west coast of Pakistan (DDLCO/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, PPD/Ethiopia, PPD/NSD).

Forecast: Small-scale breeding will likely continue in areas that received good rains in Air Mountains in Niger, but the numbers are expected to remain low. Small-scale breeding will

also likely continue in February and locust numbers will gradually increase along the Red Sea coasts, in southern Yemen and northwest Somalia along the Gulf of Aden if more rains fall in the coming weeks. Small-scale breeding may also occur along the eastern coast of Oman and a similar situation may be seen in coastal areas in Iran and Pakistan if more rains fall. The situation will remain calm in other countries during the forecast period (DDLCO/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, PPD/Ethiopia, and PPD/NSD).

Other ETOPs

Red (Nomadic) Locust (NSE): The NSE situation remained fairly calm in the IRLCO-CSA Member States during this period. Only some mixtures of NSE and grasshoppers were reported in rice and maize fields on the edges of Lake Chiuta Plains in Malawi.

Forecast: Hatching will continue and hoppers will begin appearing in Tanzania, Malawi, Mozambique and Zambia. The International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA) has planned surveys to locate potential hopper and band sites and control as needed (IRLCO-CSA).

Madagascar Migratory Locust (LMC): No update was received at the time this report was compiled, but locust activities are believed to have continued further developing. FAO and CNA locust specialists are monitoring the situation and will be reporting soon (AELGA, FAO-CNA).

Forecast: Good rains continued in the locust outbreak areas and breeding and hatching are expected to progress in several places in the transient and central

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

gregarization and multiplication zones during the forecast period. Vigilance, timely assessments and reporting as well as rapid interventions are essential to avert unexpected surprises (AELGA, FAO-CNA).

Note: *FAO and MoA/CNA have prepared an action plan for the 2011-12 locust campaign and UN/OCHA and others have made contributions to support the campaign, but additional resources will likely be needed for effective implementation. During the 2010-2011 Madagascar locust emergency campaign, the United States Agency for International through the Office of Foreign Disaster Assistance (OFDA) responded promptly and favorably to support the campaign operations. That response played a crucial role in address the problem.*

On December 20, 2011, FAO-MoA presented the locust situation, forecast for the coming months as well as funding needs, etc. at a meeting that was held in Antananarivo. Such meeting will continue over the coming months and more information is expected during this period.

*According to information received from a colleague at FAO, aerial and ground surveys will commence once a helicopter becomes available and an international consultant has begun campaign coordination. **End note.***

Tree locust: A minor infestation of a tree locust, (*Anacridium* spp.) was detected and controlled in Baringo District in Northern Kenya (IRLCO-CSA).

Moroccan (DMA), Italian (CIT) and Migratory (LMI) locusts in Central Asia and the Caucasus (CAC): No update was received on the status of these pests from CAC at the time this report was compiled, but it is expected that the locusts are in diapaus due to the cold winter weather and activities are expected to commence during spring (AELGA).

African Armyworm (AAW): AAW outbreaks were reported in January in Ruvuma Region in Tanzania and Mashonaland West Province in Zimbabwe. Control operations were carried out by affected farmers with technical and material support from the Ministries of Agriculture in the respective countries (AELGA, DLCO-EA, IRLCO-CSA).

Forecast: AAW will likely affect late planted cereal crops in Malawi, Zambia and Zimbabwe during the forecast period. Trap operators are advised to continue monitoring and reporting moth catches to crop protection staff and assist with interventions. Community forecasters are encouraged to participate in monitoring, forecasting and alerting farmers to the extent possible (AELGA, DLCO-EA, IRLCO-CSA).

Quelea (QQU): QQU birds were not reported on crops in January in any of the IRLCO-CSA Member States (IRLCO-CSA).

Forecast: QQU birds will become problematic to small grain crop growers in Tanzania, Kenya, Mozambique and Zimbabwe (AELGA, DLCO-EA, IRLCO-CSA).

OFDA/AELGA (Assistance for Emergency Locust and Grasshopper Abatement) will continue closely 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, USAID, the World Bank, 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 SGR outbreaks and avoid the threats they pose to food security and livelihoods of vulnerable communities.

CNLAs' efforts to avert mitigate or respond to potentially devastating SGR outbreaks and invasions deserve support and encouragements.

OFDA ETOP Activities

- OFDA/TAG continues its initiatives in pesticide risk reduction through stewardship network (PRRSN) programs to ensure safety of vulnerable people and protect their assets and the shared environment against pesticide pollution. OFDA/TAG successfully launched two sub-regional PRRSNs in Eastern Africa and the Horn. The Horn of Africa PRRSN initiative has created a sub-set Association in Ethiopia (PSA-E).

Prospective partners have begun expressing interests to dub or work with the association. PSA-E will serve as a guinea pig for similar structures in the future.

- Discussions that began several months ago to launch similar PRR initiatives in North Africa and the Middle East were halted by the unrests in the regions. A dialogue is underway in other regions and will soon resume the regions mentioned above.
- OFDA continues its assistance in capacity strengthening to mitigate, prevent, respond to and reduce risks of ETOP emergencies and associated human health threats as well as environmental pollutions from pesticides.
- OFDA is supporting a program to strengthen national and regional capacities in Central Asia and the Caucasus (CAC) through FAO to coordinate locust monitoring, reporting, prevention and mitigation efforts and abate the threats they pose to 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

Most of the winter breeding areas in Northwest and North Africa remained fairly dry and cool or cold in January. Light rains were recorded during mid-January along the southern Red Sea coast of NSD and the winter breeding areas in SW Asia remained fairly dry except southeast of Iran (DPPQS/India, FAO-DLIS, PPD/Ethiopia, PPD/NSD, IRLCO-CSA).

Tropical depressions and tropical cyclone activities in the Mozambique Channel and cyclone *Funso* brought very heavy rainfall and flooding in parts of Mozambique and low-lying areas of Nsanje District, southern Malawi during the 3rd dekad of the month. A total of 300 mm of rain was recorded across northern Mozambique and western Madagascar during this month. Normal to above normal rains were recorded in most of the stations near NSE outbreak areas in Malawi, northern Mozambique and southern Tanzania, eastern South Africa, much of Madagascar, eastern Zambia, and eastern Zimbabwe. Partial flooding was reported in outbreak areas in Lakes Chilwa and Chiuta, in Malawi and Mozambique as well as Zambia. Western Zambia, southern Mozambique, portions of South Africa, western Namibia and many parts of Botswana, central South Africa, Kenya, southwestern Ethiopia, much of Uganda, and southwestern coast of Madagascar received below average rainfall (NOAA, AELGA, IRLOC-CSA).

Note: According to Southern Africa Region Climate Outlook Forum (SARCOF), south eastern continental SADC and the northern parts of Tanzania and Madagascar are expected to receive above-normal rainfall from January to March, 2012. The western flank of contiguous SADC is expected to receive below normal rainfall. October to March is the main rainfall season over most of southern Africa. Owing to the differences in the rainfall-bearing systems, the rainy season has been divided into two three-month periods, i.e. October to December and January to March. **End note**

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 remained calm in the winter breeding areas in North West Africa in January. Only a few low density 2nd to 4th instar gregarious hoppers were detected in a few hundred square meters in *wadis* northwest of *Ghat* between 25 31 28N/10 00 46E in *Wadi Tyhrhir* and 25 32 32N/09 55 41E in *Wadi Telikwasin* where small-scale breeding occurred. **BUT**, survey and control operations were undermined in Libya where facilities that were set up with the help of the FAO/EMPRES program partly supported by USAID, AfDB, etc., for desert locust survey and control were, for the most part, lost during the 2011 uprising. Efforts are being made to revive the capacity of the department of plant protection and the locust unit. Hopper and adult numbers were increasing near Djanet in southeast Algeria and ground control treated 85 ha. Small-scale breeding was in progress in parts of the Air Mountains and on the western side of the Ténéré Desert in Niger where low numbers of hoppers and adults are currently present (DDLC/Libya, FAO-DLIS).

Forecast: Small-scale breeding will likely continue in Air Mountains in Niger, but locust numbers are expected to remain low during the forecast period. Given the relatively cold weather that prevailed in January no major developments are expected. However, hoppers that were detected in *wadis* near *Ghat* will likely move further north to *Alhamada-Alhamra* and *Ghadames* during the forecast period (DDLC/Libya, FAO-DLIS)..

SGR - Central Outbreak Region: Locust numbers remained unusually low in winter breeding areas along both sides of the Red Sea and Gulf of Aden due to poor rains and dry conditions. Scattered adults were reported in the *Tokar Delta* and southern plains in Sudan and near *Qunfidah* in Saudi Arabia.



(Some locust - adults or hoppers - were reported in Algeria, Libya, Sudan, Saudi Arabia and Pakistan, FAO-DLIS-02/2012)

During weekly surveys in NSD, low numbers of scattered adults were detected in the winter breeding areas on the Red Sea hills, in Tokar Delta and the southern plain in Balatat (1759N /3827E), Wadi Wanas (181102/381601E) and Mukban (181234N/ 381023E). Winter breeding areas in the Horn of Africa remained relatively dry (DLCO-EA, FAO-DLIS, PPD/Ethiopia, PPD/NSD).

Forecast: Small-scale breeding will likely occur along the Red Sea coasts, in southern Yemen and northwest Somalia along the Gulf of Aden and in the eastern coast of Oman during the forecast period, but significant developments are not expected unless more rains fall. Other countries in the region will likely remain calm (DLCO-EA, FAO-DLIS)

SGR - Eastern Outbreak Region: The SRG situation remained calm in spring breeding areas in southeast Iran and southwest Pakistan. Only a few adults were detected on the west coast near Uthal in Baluchistan Pakistan. No locusts were reported in India during January (DPPQS/India, FAO-DLIS).

Forecast: Vegetation is starting to become green in a few places in spring breeding areas on the southeast coast of Iran where limited breeding may occur if more rains fall during the forecast period, but significant developments are not expected.

The situation will remain calm in western India (DPPQS/India, FAO-DLIS).

Red (Nomadic) Locust (NSE): NSE situation was relatively calm in January although, hopper bands may have been developing in Ikuu-Katavi, Malagarasi Basin, Wembere, and North Rukwa Plains as well as Bahi Valley in Tanzania where favorable ecological conditions and high parental populations may have led to further developments. Low density hoppers were reported in Nhamatanda area in Buzi-Gorongosa Plains in Mozambique. A mixed population of NSE and grasshopper species (*Catolopis* and *Acanthacris*) was reported on 35 ha of rice and maize in Lake Chiuta Plains in Malawi. Control intervention was under preparation at the time this report was compiled. *Catolopis* was also reported in maize and sorghum in Nhamatanda, Chibabava and Chemba districts of Sofala Province in Mozambique. Control was launched by farmers with pesticides, spray equipment and technical guidance from the Ministry of Agriculture (IRLCO-CSA).



Catolopis sp. feeding on maize leaf in Malawi (source: IRLCO-CSA, Feb., 2012)

Forecast: Given the favorable ecological conditions and large numbers of residual parental populations, there is a likelihood of considerable numbers of hopper bands developing in the outbreak areas in Ikuu-Katavi, Malagarasi, Wembere and North Rukwa in Tanzania; Kafue flats in Zambia; Buzi-Gorongosa and Dimba Plains in Mozambique and Lake Chilwa Plains in Malawi during the forecast period. If so, swarms could form in

April and begin migrating into adjacent cropping areas thereafter if hoppers and bands were left uncontrolled. IRLCO-CSA to commence survey in February in all outbreak areas and launch control operations where and when needed. IRLCO-CSA intends to use *GreenMuscle*[™], a fungal based biopesticide, in ecologically sensitive areas such as wetlands and flooded areas to avoid contamination (IRLOC-CSA).



(Red locust mating in Wembere plains in Tanzania, in November, 2011, IRLCO-CSA)

Madagascar Migratory Locust (LMC):

No update was received at the time this report was compiled. However, locust activities are expected to have continued in the transient gregarization zone, in Ranotsara, Zomandao, in the Horombe plateau and Ranohira in the southwest of Jangany Betroka, in Isoanala, the Manambien circle in Babaria in Belomotra and Andranovy plateau (AELGA).



(A locust swarm seen in the Belomotra Andranovy plateaux, 13 September, 2011, Photo – FAO)

Forecast: Locusts will continue to further develop and more adults and swarms will begin to appear in the central plateaus and south-central and coastal plains where residual populations of both locust species exist during the forecast period. Breeding will continue well into April and May and form a third generation and further increase locust populations. Timely field assessments and reporting as well as preventive interventions are essential to avert any unexpected surprises. Rapid planning, reporting and execution are essential to overcome such challenges (AELGA, FAO-CNA).

Tree locust: A minor infestation of a tree locust, (*Anacridium spp.*) was detected and controlled in Baringo District in Northern Kenya. Additional information was not available at the time this report was compiled (IRLCO-CSA).

Moroccan (DMA), Italian (CIT) and Migratory (LMI): No update was received on any of these pest species at the time this report was compiled, but it is expected that the locusts will remain in diapaus until spring and the weather becomes warmer (AELGA).



(Locust prone CAC countries, FAO)

Australian Plague Locust (APL): The January update was not available at the time this report was compiled.

Timor and South Pacific: No update was received in January in Timor and South Pacific, but some activities are expected to have occurred during this period (AELGA).



(Australian plague locust, source: APLC)

African Armyworm (AAW): AAW outbreaks were reported in Ruvuma Region in Tanzania and in Mashonaland West Province in Zimbabwe. Control was carried out by farmers with material and technical support from the respective Ministries of Agriculture. AAW activities were not reported in other countries during this period (AELGA, DLCO-EA, IRLCO-CSA).

Forecast: AAW outbreaks will likely occur in Kenya and Tanzania during the forecast period, but will diminish elsewhere in the southern and south-central outbreak areas by April. Trap operators are advised to continue monitoring and reporting moth catches to crop protection staff and assist with interventions. Community forecasters are encouraged to participate in monitoring, forecasting and alerting farmers where possible (AELGA, DLCO-EA, IRLCO-CSA).

Quelea (QQU): There were no reports of QQU birds damaging crops in any IRLCO-CSA member countries during this period (IRLCO-CSA).

Forecast: QQU birds will become problematic as small grain crops start to mature in Kenya, Tanzania, Mozambique and Zimbabwe (AELGA, DLCO-EA, IRLCO-CSA).



(A QQU bird colony roosting on acacia)

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 on rodents during this month, but the pest remains a constant threat to both pre- and post-harvest crops and produces in many countries around the globe.

Note: 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. End note.

Front-line countries where ETOP outbreaks first occur are advised to remain vigilant. Countries in the invasion zones should maintain the capacity to monitor and 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. Lead farmers, community forecasters, etc., should be encouraged to be on the look out and report any ETOP sightings to field agents and other contact persons.

Inventories of Acridid Pesticide Stocks

Significant amount of pesticide was not used and the ETOP inventory remained fairly the same. Only 85 ha were sprayed against scattered adults in southeast Algeria.

Mindful of the fact that pesticides become obsolete once past their end-of-life, 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 human health risks and huge environmental contaminations and financial burdens in disposing large stocks of obsolete pesticides.

A judiciously executed triangulation of stocks from countries with large inventory to where there are immediate needs is a double-edged alternative that is worth considering.

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

Estimated (acridid) pesticide inventories

Country	Quantities in '000l/kg ^{\$}
Algeria	1,800~
Chad	108.09~
Eritrea	43.9~
Egypt	Data not available
Ethiopia	1.9+~
Libya	Data not available
Madagascar	1.6c + 0.00g + 1.1b
Mali	208.8d~
Mauritania	435.3~
Morocco	4,100~

Niger	28.21+
Senegal	156~~
Saudi Arabia	Date not available
NSD	860"
Tunisia	167.6~
Yemen	33.00 + .527 kg GM
<p>These quantities include ULV, EC and dust formulations ~ data not necessarily current ~~ as of September 28, 2011 l = 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 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)</p>	

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 Pèlerin 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	LPA MoAFSC	<i>Locustana pardalina</i> Ministry of Agriculture, Food Security and Cooperatives
CTE	<i>Chortoicetes terminifera</i>	MoARD	Ministry of Agriculture and Rural Development
DDLC	Department of Desert Locust Control	NOAA	National Oceanic and Aeronautic Administration
DL	Desert Locust	NSD	Republic of North Sudan
DLCO-EA	Desert Locust Control Organization for Eastern Africa	NSE	<i>Nomadacris septemfasciata</i>
DMA	<i>Dociostaurus maroccanus</i>	OFDA	Office of U.S. Foreign Disaster Assistance
DPPQS	Department of Plant Protection and Quarantine Services	PHD/S	Plant Health Directorate/ Services
DPV	Département Protection des Végétaux (Department of Plant Protection)	PPD	Plant Protection Department
ELO	EMPRES Liaison Officers	PPSD	Plant Protection Services Division/Department
EMPRES	Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases	PRRSN	Pesticide Risk Reduction through Stewardship Network
ETOP	Emergency Transboundary Outbreak Pest	QQU	<i>Quelea quelea</i>
GM	Green Muscle (a fungal-based biopesticide)	SARCOF	Southern Africa Region Climate Outlook Forum
ha	hectare (= 10,000 sq. meters, about 2.471 acres)	SGR	<i>Schistoseca gregaria</i>
IRIN	Integrated Regional Information Networks	SWAC	South West Asia DL Commission
IRLCO-CSA	International Red Locust Control Organization for Central and Southern Africa	TAG	Technical Assistance Group
ITCZ	Inter-Tropical Convergence Zone	USAID	Unites States Agency for International Development
ITF	Inter-Tropical Convergence Front = ITCZ)	UN	the United Nations
FAO-DLIS	Food and Agriculture Organizations' Desert Locust Information Service	ZEL	<i>Zonocerus elegans</i> , elegant grasshopper
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)		

Point of Contact:

Yeneneh T. Belayneh, Ph. D.

If you have any questions, comments or suggestions, please, feel free to contact us

ybelayneh@usaid.gov

Tel.: + 1-202-219-0469

Fax: + 1-202-219-0508

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

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