

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

Summary

The desert locust (*SGR*¹) situation remained relatively calm in February. Only 2,365 ha were sprayed against adults and hoppers in Libya and 230 ha were treated in Algeria during this month. Small-scale breeding may have been in progress in the Air Mountains in Niger. Very few adults were detected during surveys carried out in southern coastal areas in Sudan near Eritrea. Scattered adults were reported in winter breeding areas in northern Oman and a similar situation may be present central coast of Yemen. A few adults were reported in spring breeding areas in west coast Pakistan. No locusts were reported elsewhere during this period (DDLCO/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, PPD/Ethiopia, and PPD/Sudan).

Forecast: Small-scale breeding will likely continue in areas where good rains were recorded in southwestern Libya and southeastern Algeria. Adult locusts will likely move from northern Niger to southern Algeria and increase locust populations during the forecast period. Small-scale breeding will likely commence in the eastern coast of Oman, but significant developments are not expected. Small-scale breeding will also begin in spring breeding areas in

western coastal Pakistan and southeastern Iran during the forecast period. Other areas will likely remain calm during the forecast period (DDLCO/Libya, DLCO-EA, DPPQS/India, FAO-DLIS, PPD/Ethiopia, and PPD/Sudan).

Other ETOPs

Red (Nomadic) Locust (NSE): Mixed populations of NSE and LMC were reported in Madagascar during the first dekad of February. NSE populations mixed with grasshoppers were also reported earlier in rice and maize fields on the edges of Lake Chiuta Plains in Malawi. No new information was received in the primary outbreak areas in Tanzania or elsewhere in the regions at the time this report was compiled, but it is likely that NSE situation has been gradually developing during February (FAO-CNA, IRLCO-EA).

Forecast: Hatching and hopper and band formations will continue in Tanzania, Malawi, Mozambique and Zambia. IRLCO-CSA will continue surveying potential adult, hopper and band sites and launch control as needed (IRLCO-CSA).

Madagascar Migratory Locust (LMC): As of February 5th hoppers and adults were treated on more than 8,450 ha. No new info was received at the time this update was compiled, but it is expected that locust activities continued in the central, southern and northern Horombe Plateau and other places in the country. FAO and CNA locust specialists continued monitoring the situation and effecting control interventions and updates are expected in the coming days (AELGA, FAO-CNA).

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

Forecast: Locusts will further develop during the forecast period in areas where good rains fell over the past months in the transient and central gregarization and multiplication zones. Vigilance, timely assessments and reporting as well as rapid interventions are essential to avert any major threats to agriculture and pasture land (AELGA, FAO-CNA).

Note: On February 6, 2012, FAO-MoA held in Antananarivo and discussed the current locust situation and the forecast for the coming months. The team estimated the cost of the 2011-2012 locust campaign at USD 7.2 million. So far, cash and in-kind contributions and pledges from the UN/OCHA, IFAD, AfDB, EU, UNDP, France, and the Government of Madagascar are covering roughly half the estimated funds needed for the campaign. **End note.**

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 in CAC at the time this report was compiled, but it is expected that locusts are still in diapaus (inactive) due to the cold winter weather, however, activities are expected to commence during spring as the temperatures start rising (AELGA).

African Armyworm (AAW): AAW outbreaks were not reported in February and only positive trap catches were recorded in parts of Tanzania during February (DLCO-EA, IRLCO-CSA, and PHS/Tanzania).

Forecast: AAW activities will likely continue in Tanzania and perhaps commence in Kenya during the forecast period. Trap operators and community forecasters are encouraged to continue monitoring trap catches and report to crop protection staff as well as alert farmers promptly (AELGA, DLCO-EA, and IRLCO-CSA).

Quelea (QQU): QQU birds were not reported in February in the traditional outbreak/invasion areas in Eastern Africa and the Horn (AELGA, DLCO-EA).

Forecast: QQU birds will likely become problematic to small grain crop growers in Tanzania, Kenya, Mozambique and Zimbabwe during the forecast period (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 – a good example of **sustainable disaster risk reduction** with modest input.

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

During February, several ETOP prone countries, including Namibia, western Botswana, and local areas in Zambia, South Africa, western Tanzania and northern coast of Madagascar received above average rainfall. Others - portions of southern Ethiopia, Kenya, much of Tanzania, eastern Zambia, eastern Botswana, Zimbabwe, eastern South Africa, much of Mozambique and Madagascar received below average rainfall. Rainfall was recorded on 18-19 February in areas stretching from Tamanrasset, Algeria to Mizda, northwest of Ghat in Libya where favorable ecological conditions continued for weeks and allowed locust numbers to increase. Most of the winter breeding areas in North Western Africa, the Horn as well as spring breeding areas in SW Asia remained fairly dry (DPPQS/India, FAO-DLIS, NOAA, IRLCO-CSA, PPD/Ethiopia, PPD/Sudan).

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 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: Locust outbreaks were reported in February in southwest Libya near southeast Algerian border where good rains fell in October, but the situation could not be detected in



time for appropriate actions, due to the political unrest that was

manifested in the country. That created ideal conditions for locusts to breed freely and further develop in areas northwest of Ghat. Interventions began in February and treated some 2,365 ha during the month. Some of the adults from southwest Libya moved to adjacent areas in southeast Algeria where local breeding was already underway in Djanet. Control operations treated 230 ha in Algeria during February (see Map, FAO-DLIS, 2/2012). Small-scale breeding may have been in progress in the Air Mountains in Niger during this month (DDLC/Libya, FAO-DLIS).

Forecast: Small-scale breeding will likely continue in southwestern Libya and southeastern Algeria. Adult locusts from northern Niger will likely move to southern Algeria and increase locust populations

during the forecast period. Should more rains fall during the coming months, locust activities will increase during the forecast period. Surveillance and preventive interventions are essential to avert any significant outbreaks (AELGA, DDLC/Libya, and FAO-DLIS).

SGR - Central Outbreak Region: Scattered adults were seen mating and laying eggs on the southern coast in Sudan near the Eritrea border. Isolated immature adults were reported in northern interior of Oman and a similar situation may have been present on the central Red Sea coast in Yemen where surveys were not conducted. No locusts were reported elsewhere in the region during February (DLCO-EA, FAO-DLIS, PPD/Ethiopia, and PPD/Sudan).

Forecast: Small-scale breeding will likely commence in the eastern coast of Oman, but significant developments are not expected. Other countries in the region will likely remain calm during the forecast period (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 in Baluchistan Pakistan. No locusts were reported in India during February (DPPQS/India, FAO-DLIS).

Forecast: Small-scale breeding will begin in spring breeding areas in western coast of Pakistan and southeastern Iran, but significant developments are not expected during the forecast period (DPPQS/India, FAO-DLIS).

Red (Nomadic) Locust (NSE): Mixed populations of NSE were reported in Madagascar during the first dekad of the month. NSE populations mixed with grasshoppers were reported earlier in rice and maize fields on the edges of Lake Chiuta Plains in Malawi. No update was received in the primary outbreak areas in Tanzania 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 lead to further developments at the time this report was compiled, but it is likely that NSE situation has been gradually developing during February and control operations may have been launched in some places (FAO-CNA, IRLCO-EA).



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

Forecast: Given the favorable ecological conditions and the presence of 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 by April and begin moving into cropping areas.



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

IRLCO-CSA is expected to have to commenced survey in February in all outbreak areas and launch control operations as needed. IRLCO-CSA indicated that it will use *GreenMuscle*[™], a fungal based biopesticide, in ecologically sensitive areas such as wetlands and flood planes to avoid habitat contamination (IRLOC-CSA).

Madagascar Migratory Locust (LMC): As of February 5th hoppers and adults were treated on more than 8,450 ha. FAO and CNA locust specialists continued monitoring the situation. No new information was received at the time this report was compiled, but 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 Andranovory plateau (AELGA, FAO-CNA).



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

Forecast: As good rains continued in the locust outbreak and invasion areas, breeding will continue and form 3rd generation populations in the central plateaus and south-central and coastal plains where residual populations of LMC and NSE were reported earlier. Timely assessments and reporting as well as preventive interventions are essential to avert any unexpected surprises (AELGA, FAO-CNA).

Moroccan (DMA), Italian (CIT) and Migratory (LMI): No update was received on any of these pests at the time this report was

compiled, but it is expected that locusts will remain in diapause until the weather becomes warmer in spring (AELGA).



(Locust prone CAC countries, FAO)

Australian Plague Locust (APL): Hopper band activity continued during the first half of February in Northeast of South Australia and fledglings increased adult numbers forming small swarms in late February. Locust populations remained generally low throughout Queensland, New South Wales and Victoria during February. Adult dispersal and pathogenesis may have decreased population levels throughout summer despite continued heavy rainfall. Numerous late instar hopper bands were reported in South Australia during the first half of February and fledging continued throughout the month, but few swarms have been reported, suggesting some emigration during February. A continued low density population persisted in New South Wales during February. Adult numbers remained low in the Central West, Darling and Western Livestock Health and Pest Authority (LHPA) areas. Hopper and band infestations were reported in Western Australian wheat belt in January and February where a population increase was witnessed over the previous autumn and spring.

Forecast: Small swarms will form in the infested part of Northeast South Australia in March. Any eggs laid before mid-March

could develop or diapause, with some hatching in March and others in spring. The majority of eggs laid from mid-March to mid-April will enter diapause. Adult redistribution is likely during February and March and egg laying could increase autumn. The population level is expected to remain low in New South Wales, Queensland and Victoria and no major agricultural risk is expected during fall (APLC).

Timor and South Pacific: No update was received in February 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 not reported in February and only positive trap catches were recorded in parts of Tanzania during February (DLCO-EA, IRLCO-CSA, PHS/Tanzania).

Forecast: AAW activities will likely continue in Tanzania and perhaps commence in Kenya during the forecast period. Trap operators and community forecasters are encouraged to continue monitoring moth catches and report to crop protection staff and alert farmers (AELGA, DLCO-EA, and IRLCO-CSA).

Quelea (QQU): QQU birds were not reported in February in Eastern Africa and the Horn of Africa (DLCO-EA).

Forecast: QQU birds will likely become problematic to small grain crop growers in Tanzania, Kenya, Mozambique and Zimbabwe (AELGA, DLCO-EA, 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 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 and community forecasters are encouraged to remain vigilant and report any ETOP sightings to field agents and other contact persons.

Inventories of Acridid Pesticide Stocks

ETOP pesticide inventory remained largely unchanged during February and only 2,595 ha were treated against adult SRG in Libya and Algeria during this period.

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	Data not available
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

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,

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)

LIST OF ACRONYMS

AAW *African armyworm
(Spodoptera expempta -
SEX)*

AELGA *Assistance for Emergency
Locust Grasshopper
Abatement*

AfDB *African Development Bank*

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,
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*

NSD *Republic of North Sudan*

NSE *Nomadacris septemfasciata*

OFDA *Office of U.S. Foreign Disaster
Assistance*

PHD *Plant Health Directorate*

PHS *Plant Health Services*

PPD	Plant Protection Department
PPSD	Plant Protection Services Division/Department
PRRSN	Pesticide Risk Reduction through Stewardship Network
QQU	Quelea quelea
SARCOF	Southern Africa Region Climate Outlook Forum
SGR	Schistoseca gregaria
SWAC	South West Asia DL Commission
TAG	Technical Assistance Group
USAID	United States Agency for International Development
UN	the United Nations
ZEL	Zonocerus elegans, elegant grasshopper

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