

**Emergency Transboundary
Outbreak Pest (ETOP) Situation
Report for April with a Forecast
till mid-June, 2013**

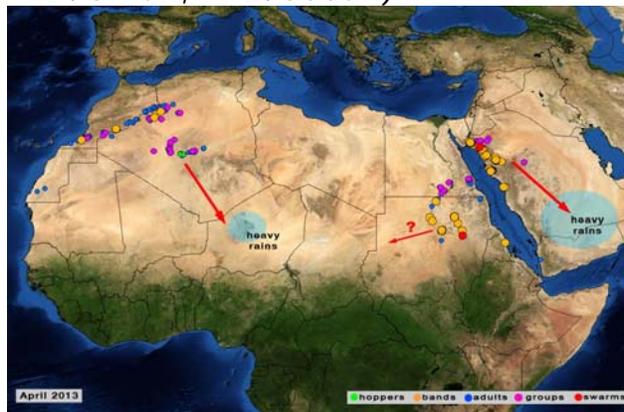
Summary

The Desert Locust (SGR¹) situation continued developing in northwestern Africa in Morocco and in Algeria where the national locust control unit treated 4,664 ha. SGR remains serious in northern Sudan where long stretches of instar hopper bands were seen near cropping areas along the Nile River. Small-scale breeding was reported near Lake Nasser in southern Egypt. Hopper bands were reported in the northern sub-coastal areas in Saudi Arabia. The national locust control units in Sudan, Saudi Arabia, Egypt and Eritrea with their own resources treated close to 17,427 ha combined during this period. Locusts were not reported in Oman, Ethiopia, Sahel West Africa or the central and eastern outbreak regions during this period (CNLA/Chad, CNLAA/ Morocco, DLCO-EA, DPPQS/India, FAO-DLIS, PPD/Oman, PPD/Sudan).

Forecast: Breeding will continue in May and small swarms and groups will form in northwest Africa. As conditions become unfavorable, locusts will begin moving south to northern Sahel in West Africa in June. In Sudan, adult locusts will mature in the Nile Valley and breed locally or migrate to the summer breeding areas further south and southeast and start laying eggs in June.

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

Small swarms may also form and move west towards northwestern Sahel provided conditions become favorable. In Saudi Arabia, adults will form groups and small swarms and migrate to the interior of the country and breed where good rains were recorded here and along adjacent areas to northern Yemen. Small-scale breeding is likely in Northern Oman where good rains fell in late April. Other countries in the central outbreak region will likely remain fairly calm. The eastern outbreak region could see low numbers of adults during the forecast period. Nevertheless, active surveillance and proactive interventions remain essential to avoid unexpected surprises (CNLA/Chad, CNLAA/ Morocco, DLCO-EA, DPPQS/India, FAO-DLIS, PPD/Oman, PPD/Sudan).



(SGR situation, FAO, 4/2013)

Other ETOPs

Red (Nomadic) Locust (NSE): Swarms were reported migrating west from Ikuu towards Katavi during the last week of April. Locusts persisted in Lake Chiuta plains in Malawi and Mozambique posing a threat to cultivated crops and pasture. Lack of resources undermines survey and control operations to abate a looming locust threat in the region. IRLOC-CSA appeals to its Member States and development partners for assistance. It anticipates launching

extensive survey and control operations as soon as resources are available (IRLCO-CSA).

Forecast: Uncontrolled swarms in Ikuu-Katavi plains will likely migrate and invade cereal crops in Tanzania. Swarms could also reach Uganda, Rwanda, Burundi, and Democratic Republic of Congo or invade Malawi, Mozambique, Zambia, and Zimbabwe if the prevailing winds change direction in the coming months. Active surveillance, monitoring and timely preventive interventions remain essential to avoid impacts of locusts on crops and food security (AELGA, IRLCO-CSA).

Madagascar Migratory Locust (LMC): A 2km x 15km swarm was reported near Ranohira in the southwest and four more swarms were detected on the Horombe Plateau by the Locust Watch Unit on April 25th. Earlier in the month LWU reported a 60 km long uninterrupted hopper band in the southwest between Ambatry and the town of Ejeda (DPV, FAO).

Threats and potential crop losses:

According to a DPV/FAO estimate, crop losses to locust invasions could amount to 10% of the annual rice production in the mid-west. There is also a risk of losses of off season rice crops and other cereal crops in the mid-west and in the Antsirabe basin (DPV, FAO).

Appeal: According to FAO and DPV, lack of resources undermines the much needed survey, monitoring, control interventions and assessments and further exacerbates the locust threats

to vulnerable communities and food security in general.

At the request of the GoM, FAO issued an appeal to the international community to support the proposed 3-year locust emergency response and preparedness program to avert a potentially devastating plague as well as to strengthen national capacity to abate and respond to future locust threats (DPV, FAO).



(A Malagasy locust swarm, FAO)

Forecast: Swarms will continue moving north and northwest and reach major wheat growing areas. Hopper formations could lead to more swarm developments during the 2nd to 3rd dekads of May. A similar situation could occur in the Manambien circle where conditions could be more favorable due to Cyclone Haruna and cause locusts to further develop. Aggressive and timely surveillance and control are essential to avoid any crop losses (DPV, FAO).

Moroccan (DMA), Italian (CIT), Migratory (LMI) Locusts in Central Asia and the Caucasus (CAC): A late received report indicated that DMA began hatching in Afghanistan, Tajikistan and Uzbekistan late March. The national crop protection departments controlled hoppers on close to 10,000 ha in Afghanistan and Tajikistan

combined. Hatching may have also commenced in Turkmenistan around the same time and in Kazakhstan and Kyrgyzstan early April. By mid-April Azerbaijan and Georgia may have seen hoppers. CIT may have begun appearing in Central Asia from the 2nd half of April on (FAO-ECLO).

Forecast: DMA hoppers and swarms will begin forming in several countries during the forecast period. CIT will begin hatching in May in Armenia and Georgia. Given the massive egg laying of the LMI that occurred in parts of Uzbekistan and neighboring counties in the Aral sea flood plains last fall, active surveillance and monitoring remain essential to avert any potentially large-scale invasions (AELGA, FAO-ECLO).

African Armyworm (AAW): In Ethiopia, AAW outbreaks were reported in the Southern part of the country. The Regional MoA staff organized control operations, but details were not available at the time this prepared was compiled. AAW outbreaks were also reported in Kilimanjaro and Arusha regions in northern Tanzania. The pest was controlled by farmers with material and technical assistance from MoA (DLCO-EA, IRLCO-CSA).

Forecast: AAW outbreaks are expected to continue in Ethiopia and Kenya and may begin appearing in eastern Uganda. Trap operators, including those from the community based armyworm survey, monitoring, forecasting and early warning (CBAMFEW) must report trap catches to the appropriate personnel on a timely bases. AAW will fade away in most of

Tanzania and the central and southern outbreak countries will remain free of the pest during the forecast period (AELGA, DLCO-EA, IRLCO-CSA).

Quelea (QU): A DLCO-EA spray aircraft with material assistance by MoA/Tanzania controlled QU infestations, roosts and colonies in several locations in Tanzania. The birds were seen threatening rice, sorghum and millet crops. QU birds were also reported in Chokwe district in Mozambique, but other outbreak or invasion countries did not report QU activities during this period (DLCO-EA, IRLCO-EA).

Forecast: As small grain crops mature in Kenya, Tanzania, Mozambique, Zimbabwe and other countries QU outbreaks will likely appear. Active surveillance and timely reporting and interventions remain essential (AELGA, DLCO-EA, IRLCO-CSA).

OFDA/AELGA (Assistance for Emergency Pest Abatement) will continue monitoring ETOP situations closely in all regions and issue decadal and monthly updates and advices as necessary. **End summary**

Progresses made in SGR Frontline Countries:

SGR frontline countries (FCs) in Sahel West Africa, namely **Chad, Mali, Mauritania, Niger, and Senegal (an invasion country)** have established autonomous national locust control units (CNLA) responsible for all DL activities.

Funds provided by the African Development Bank, USAID, the World Bank, France, FAO, host-governments as well as assistance from neighboring countries enabled FCs to equip CNLAs and build infrastructure as well

as help train staff to prevent and respond to SGR outbreaks. Through these supports and with their own resources, FCs were able to minimize and avoid the threats the SGR poses to food security and livelihoods of vulnerable communities.

CNLAs' continued efforts *to prevent, mitigate, avert and/or respond to potentially devastating SGR outbreaks and invasions* are a good example of **sustainable disaster risk reduction** that *deserves* encouragements and support.

OFDA ETOP Activities and Impacts

- OFDA/TAG continues its sustainable pesticide risk reduction initiatives through stewardship network (SPRRSN) programs through capacity strengthening to ensure safety of vulnerable populations and protect their assets as well as shared environment against pesticide poisoning and pollution. OFDA/TAG has successfully launched two sub-regional SPRRSNs in Eastern Africa and the Horn. The Horn of Africa SPRRSN initiative has created a "model" Association dubbed as Pesticide Stewardship Association-Ethiopia (PSA-E) which is being considered as a boiler plate for similar initiatives.
- Discussions that began several months ago to launch similar PRR initiatives in North Africa and the Middle East were delayed by the unrests manifested. An effort is underway to resume dialogue with partners in these regions.
- OFDA continued its assistance for DRR capacity strengthening programs through a cooperative agreement with FAO to mitigate, prevent, and respond to and reduce the risk of ETOP emergencies and avoid unsafe use and mishandling of pesticides and application platforms.
- OFDA's assistance for obsolete pesticide prevention has enabled FAO to develop a pesticide stock managing system (PSMS) that has streamlined pesticide inventory monitoring and management. Thanks to OFDA's contributions, PSMS has enabled participating countries to conduct regular inventories and monitor and make informed decisions to prevent the accumulation of obsolete stocks and thereby avoid costly disposal operations.
- OFDA supports in strengthening national and regional capacities for ETOP operations in Central Asia and the Caucasus (CAC) is well underway. The program focuses on improving national and regional capacities to better coordinate locust monitoring and reporting as well as joint plans for survey, mitigation and prevention to minimize the threats they pose to food security and livelihoods of vulnerable populations.
- OFDA supported activities of the three-year fixed obligation grant on scaling up community-based armyworm monitoring, forecasting and early warning are in progress. The program aims at reducing the risk of armyworm threats to food security and livelihoods of rural communities and vulnerable populations. Activities are being coordinated by the DLCO-EA in collaboration with partners in Ethiopia, Kenya and Tanzania.

Note: All ETOP SITREPs, including the current one can be accessed on our website:

http://transition.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/ end note.

Detailed accounts of the ETOP situation and predictions for the next six weeks are presented henceforth.

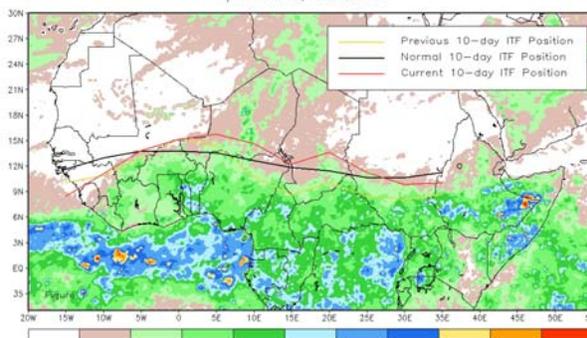
Weather and ecological conditions

During the 3rd dekad of April, the Inter-Tropical Front (ITF) continued its northward progress, with an above-average position across a wide portion of central Africa, but below-average along the edge. In the west, southwesterly winds associated with anomalous low-level cyclonic circulation over North Africa resulted in isolated heavy rain over central Niger (the Air Mountain). The mean western portion of the ITF approximated 14.1 N, which was 0.8 degrees above the historic mean position.

Strong southerlies enhanced low-level convergence and brought light to moderate rain over southeastern Chad in the eastern portion during the 1st and 2nd dekads of April. Northern Chad was dry with clear sky during most of April. The average temperature during the day was around 39 degree Celsius and ecological conditions remained unfavorable in the DL zones in Fada, Kalait and Salal and only spots of some perennial plants and green vegetation were observed in a few places. Unseasonable rain was recorded in North Darfur in areas adjacent to northeastern Chad during the last dekad of the month. The mean eastern portion of the ITF was located near 11.1 N and 0.2 degrees above the average position (see map for the

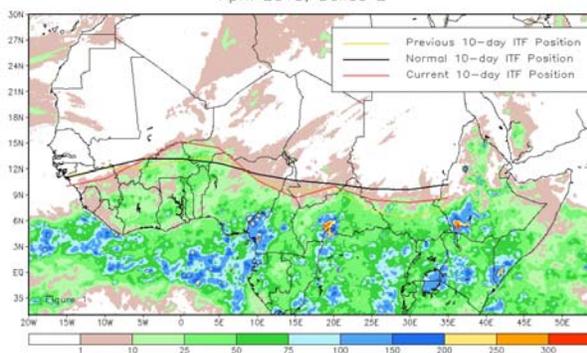
current ITF position relative to the climatological average for the third dekad of April and its position during the second dekad of the month).

Current vs. Normal Dekadal ITF Position and RFE Accumulated Precipitation (mm)
April 2013, Dekad 3



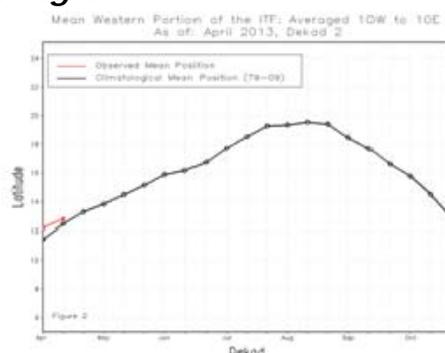
During the 2nd dekad of April, the ITF showed northward migration across the central portion of West Africa, but lagged behind the mean climatological position elsewhere. Its mean position for the western segment was located around 12.8 N, 0.3 degrees above normal position owing to an unusual surge of moist southerly winds across the Gulf of Guinea which brought moderate to locally heavy rain as far north as Burkina Faso and western Niger. In contrast, the mean eastern portion was located near 8.8 N, trailing behind the average position by 1.1 degrees due to continued intrusion of dry air from the North. In Morocco, environmental conditions were generally favorable for the survival of the SGR in the south and the southeast in the Draa and Ziz-Ghris valleys during April (see map and, NOAA) (CNLA/Chad, CNLA/Morocco, DLCO-EA).

Current vs. Normal Dekadal ITF Position and RFE Accumulated Precipitation (mm)
April 2013, Dekad 2



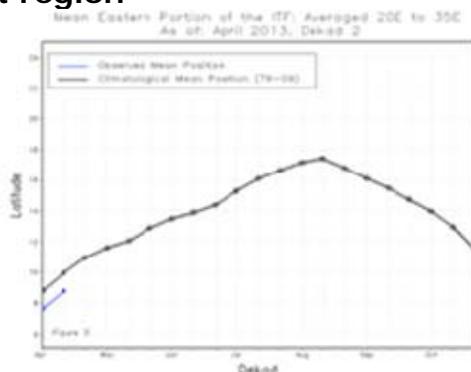
Good rains were recorded in the interior of Saudi Arabia and Yemen during the last week of April as well as in northern Oman where flooding occurred. The north western highlands in Somalia and adjacent areas in eastern Ethiopia also experienced good rains. The below graphs show a time series, illustrating the latitudinal mean of the western and eastern portion of the ITF, respectively, and their evolutions since the start of April.

West region



No rain was reported and vegetation continued to dry out on both sides of the Red Sea coasts. The eastern SGR outbreak areas remained dry during this period.

East region



The rainy season has ended in the NSE outbreak areas and only light rains were recorded in stations near Buzi Gorongosa (Buzi ~ 56.0 mm, Mafambisse ~60.00 mm) and Dimba (~ 55.00 mm) plains in Mozambique in April.

In Madagascar rainfall deficit has marked end of the rainy season and resulted in drying up of vegetation in the gregarization areas as of March. In the grassy areas, particularly *Heteropogon contortus* had matured with 70-80% coverage and 60 to 120 cm height. On the Horombe Plateau, the coverage ranges from 40 to 80% with a medium height of 40 to 80 cm (CNLA/Chad, CLAA/Morocco, DLCO-EA, DPPQS/India, FAO-DLIS, IRLCO-EA, NOAA, PPD/Oman)..

As the weather conditions in CAC improve, locust activities will continue further developing during the coming months (FAO-ECLO).

Note: *The changes in the weather patterns that contribute to ecological shift in ETOP habitats are believed to exacerbate the risk of pest outbreaks, resurgence and can lead to emergence of new pests. Regular monitoring and reporting of anomalous observations in habitats and pest situation are essential. End note.*

SGR - Western Outbreak Region:

Small-scale breeding occurred in Morocco and Algeria south of the Atlas Mountains and small groups and bands were reported by the end of April. Control operations treated close to 4,664 ha in Algeria. No locusts were reported in other countries in the region during this period (AELGA, CNLA/Chad, CNLAA/Morocco, FAO-DLIS).

Forecast: Southern and southwestern Morocco and central and western parts of the Sahara in Algeria will experience more adults, hopper groups and bands in May. With vegetation drying out, increasing numbers of adult groups and perhaps a few small swarms may begin migrating south towards northern Sahel by the end of the forecast period and likely reach the Air Mountains in northern Niger where good rainfall was recorded during April. Should conditions allow, a few small swarms from the interior of Sudan may migrate and augment the emigrating populations in North the Sahel. Low

numbers of adults may start appearing in parts of Mauritania, Mali, Niger and Chad by the end of the forecast period and towards early July, but significant developments are not expected during the forecast period (CNLA/Chad, CNLAA/Morocco, FAO-DLIS).

SGR - Central Outbreak Region: Hopper bands continued to form near cropping areas along the Nile River in northern Sudan in April. Ground operation by PPD/Sudan treated 1st–3rd instars hopper bands on 2,252 ha in Northern State and the River Nile State and solitary scattered mature adults were observed in the Red Sea State in Sudan. In Saudi Arabia, PPD/Saudi treated 13,712 were treated. Small-scale breeding occurred near Lake Nasser in southern Egypt where PPD/Egypt treated 403 ha. In Eritrea, PPD/Eritrea treated 1,060 ha on the northern Red Sea coast during this period. Overall, locust numbers continued declining in winter breeding areas along both sides of the Red Sea where control operations and drying vegetation played a role. No locusts were reported during surveys carried out in Dakhiliya and Musandam in Oman and in eastern Ethiopia and no surveys were reported in other countries during this period (DLCO-EA, FAO-DLIS, PPD/Oman).

Forecast: Groups and small swarms are expected to form during May and the Nile Sudan could experience a 2nd generation breeding in June along the Nile. Should conditions favor (early summer rains), adults could migrate to the summer breeding areas. A new generation of adults from breeding that continued in northwest Saudi Arabia could move to the interior of the country and further breed in areas of recent rainfall on the edges of the Empty Quarter and the interior of Yemen. In Oman low numbers of adults may begin appearing and breed on a small-scale in

areas of recent rainfall during the forecast period (DLCO-EA, FAO-DLIS).

SGR - Eastern Outbreak Region: A few scattered solitary adults were observed in the spring breeding areas in southeast Iran in April during joint surveys carried out by Iran and Pakistan along their southern borders. No locusts were reported in southwestern Pakistan and no locust was reported in India during this period (DPPOS/India, FAO-DLIS).

Forecast: Small-scale breeding may occur in areas of recent rainfall in Iran and Pakistan, but a significant development is not expected. The summer breeding areas along the Indo-Pakistan border will likely witness low numbers of adults during the forecast period (DPPOS/India, FAO-DLIS).

Red (Nomadic) Locust (NSE): Populations of NSE were located in Ikuu plains where control operations were carried out in March 2013 by the International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA) and the Ministry of Agriculture, Food Security and Cooperatives (MAFSC) Tanzania with financial assistance from Food and Agriculture Organization (FAO). IRLCO-CSA used Green Muscle, an environmentally friendly biopesticide and Fenitrothion 96% to control swarms that were ready to escape into adjacent areas.



NSE outbreak countries and localities (yellow) and localities (red dots) (IRLCO-CSA)

According to IRLCO-CSA, extensive survey and control operations in Tanzania were limited by lack of resources. Swarms from Ikuu plains were observed migrating west wards into Katavi plain during the last week of 4th (IRLCO-CSA).

Forecast: Uncontrolled swarms in Ikuu-Katavi plains are likely to emigrate further and invade cereal crops in Rukwa, Kigoma, Kagera regions of Tanzania as well as neighboring countries, including Uganda, Rwanda, Burundi, Democratic Republic of Congo. When and if the prevailing winds change directions, escapee swarms could also invade countries to the south, including Zambia, Malawi, Mozambique and Zimbabwe. Active surveillance, monitoring and timely preventive interventions remain essential in outbreak and invasion areas, including Lake Chilwa/Lake Chiuta plains, Buzi-Gorongosa and Dimba plains and Kafue Flats and Lukanga swamps (IRLCO-CSA).

Madagascar Migratory Locust (LMC) and Red (Nomadic) Locust (NSE):

LMC: As recently as April 25th, DPV/FAO-LWU reported a swarm measuring 2 km wide and 15 km long nearby Ranohira (between Ihosy and Tulear) during a trip to the locust affected areas by a team of DPV/LWU and Agence France Presse staff. The team also reported 4 more swarms on the Horombe Plateau later in the. During the second dekad of April, LWU reported a 60 km long uninterrupted hopper band between Ambatry (20 km south of Betsioky) and the town of Ejeda. *(Note: LWU was established by FAO in February 2013 as part of the 3-year locust campaign to assist the Malagasy crop protection department (DPV) with training, monitoring and collecting data on the locust situation, crop damage, weather conditions and other related matters. End note).*

According to DPV, new hopper bands were developed in Manja, on the Bekily– Fotadrevo plains, on the Belomotra and Mahafaly plateau. However, the drying up of the vegetable begins forcing locusts to concentrate and form dense swarms and groups. DPV/LWU reported swarms on Zomandao, Horombe and Bekily highlands, in Belafy, Antsalova, and Mandoto in the mid-West where the risk of crop losses (corn and rice) could reach 50%. Swarms were also reported in Bemara and North, but the situation in Mahajanga basin was unclear at the time this information was received.

A late received report indicated that heavy infestations of dense and light mature and immature swarms as well as 1st to 5th instar hoppers and bands were reported in in March in the gregarization areas in the northwest Initial Multiplication Area (FRIEND -Menamatiloto – Zomandao – North Horombe) and in the Transitory gregarization areas (AGT) (Manja, Beroroha and Bottom of Betisiriry). So far, DPV was able to treat 30,000 ha since locust activities began late last year.

The situation in the Transitory multiplication areas (in south Befandriana) is much the same as that of the northwestern initial multiplication areas (FRIEND–NO). The densation areas (AD) adjacent to the northwestern side of the FRIEND and the northern side of the transitory multiplication areas did not experience major infestations. In the Central region of the initial multiplication (FRIEND) areas and transitory gregarization areas (Menamatiloto – Zomandao – North Horombe), mature swarms were seen flying over and hoppers and transient bands of 1st to 5th instar were also observed. Hatching was in progress. In the Bekily-Fotadrevo plains in east of Mahafaly, a swarm was seen flying overhead in Fotadrevo during the 3rd dekad of February and mating and laying during the 1st dekad of March. Allochthonous (emigrating) populations of locusts were seen arriving in the interior of Mahafaly. In the densation areas in Belomotra and Mahafaly plateau in the low lands of Toliara in the southwest, light to dense

swarms were seen flying during the 3rd decade of February. Mating was observed on Mahafaly and Belomotra plateaus and 1st to 5th instar hoppers and bands were detected in early March. The coastal lowland of Mahafaly was not infested and no update was available for the southern region in March (DPV/LWU).

Threat and potential crop losses:

According to DPV/LWU, losses of crops could amount to 10% of the annual rice production in the whole mid-west. There is also a risk of substantial losses of off season rice crops and other cereal crops in the mid-west and the Antsirabe basin.

Forecast: Swarms will continue moving from the transitory multiplication areas towards the FRIEND following the winds. These swarms will likely arrive in the north (in the Majunga basin, Sofia, or even Alaotra), an area already threatened. This will increase invasion areas. Hatchings and hopper formations may have likely continued from the 3rd dekad of April and this could lead to another swarm during the 2nd to 3rd dekad of May. The same situation could also take place and further worsen in the Manambien circle where conditions could be more favorable as other areas dry out (DPV/LWU).

UN/FAO in close collaboration with MoA/Madagascar developed a three year emergency response program. This program entails short, medium and long-term activities that are aimed at abating the current outbreak, keeping the locust in recession and establishing national capacity to monitor and respond to recurring locust invasions and contribute to the country's food security and economy. The program which comes with a hefty price tag of \$41.5 million was shared with development partners and other stakeholders. The proposed program anticipates to control and / or protect more than 2.15 million ha

over the next three years (massive undertakings with potentially significant environmental impacts that require close attention). DPV/LWU underscore that lack of materials and human resources undermines the much survey, monitoring, control and assessments and exacerbates the threat the locusts pose to vulnerable populations and communities. DPV and FAO anticipate control operations will require hundreds of thousands of liters of pesticides and substantial amount of resources over the next months.

Moroccan (DMA), Italian (CIT) and Migratory (LMI) locusts in Central Asia and the Caucasus (CAC): A late received report indicated that favorable ecological conditions allowed DMA to start hatching in late March in Afghanistan, Tajikistan and Uzbekistan. A combined total of 10,000 ha were treated by the national PPDs against DMA in Afghanistan and Tajikistan. DMA may have also begun hatching in Turkmenistan around late March and in other countries in April. DMA was not reported in Armenia Azerbaijan or Georgia where the temperature was still low with occasional snow on the ground during March, but may have begun hatching by mid-April. DMA may have begun hatching in Kazakhstan and Kyrgyzstan during the 1st half of April.



(Locust prone CAC countries, FAO)

Forecast: CIT will start hatching in May in Armenia and Georgia. Given that massive egg laying from LMI occurred in the Aral Sea flood

plains in parts of Uzbekistan and adjacent countries, large-scale hatching and hopper developments will likely occur during the forecast period provided ecological conditions become favorable (the ground is moist but not heavily flooded), in the coming months. Hence, enhanced surveillance and monitoring should be maintained to avert any potentially large-scale LMM outbreaks and invasions (AELGA, FAO-ECLO).

Australian Plague Locust (APL): No update was available at the time this report was compiled, but based on previous forecast, it is likely that locust numbers may have remained low (AELGA, APLC).



(Australian plague locust, source: APLC)

Timor and South Pacific: No update was received on the locust situation in Timor and South Pacific in April. However, locust and / or grasshopper activities are expected to have occurred during this period (AELGA).

African Armyworm (AAW): In Ethiopia, the first AAW outbreaks of the season were reported in Fedis and Babile *Woredas* (Districts) in eastern Ethiopia. On April 25th, AAW farmers' forecasters who were trained and equipped through the OFDA-sponsored community-based armyworm monitoring, forecasting and early warning (CBAMFEW) project issued an alert on a possible AAW outbreak in Fedis, Babilay and the surrounding *Woredas* (districts) and adjacent areas. The occurrence of the

outbreaks reinforced the relevance of the CBAMFEW program and earned the forecasters trust among the farming communities and other partners. Ground control operations were organized by the MoA's regional agricultural office, but details were not available at the time this prepared was compiled (DLCO-EA).

AAW outbreaks were reported in Moshi rural, Rombo District in Kilimanjaro Region as well as in Meru District in Arusha Region in northern Tanzania during the third week of April. The outbreaks were controlled by the affected famers with material and technical support from the MoA. AAW activities were not reported in other countries during this period (DLCO-EA, IRLCO-CSA, PHS/Tanzania).



(Late stage maize leaves damaged by AAW caterpillars a phenomenon uncommon as the caterpillars often feed on younger tender leaves, photo courtesy GASPARG, February, 2013)

Forecast: AAW outbreaks are expected to continue in Ethiopia and Kenya and may begin appearing in eastern Uganda. Active monitoring and reporting will remain essential. AAW outbreaks will fade away in most of Tanzania including the northern part and the central and southern outbreak countries will remain free of AAW during the forecast period (AELGA, DLCO-EA, IRLCO-CSA).

Quelea (QU): QU outbreaks were reported in Tana River, Homa Bay, Kisumu and Siaya (Bunyala) Counties in Kenya. The birds were

reported attacking rice and sorghum. Control operations were planned by the MoA/PPD. In Tanzania, the bird was reported attacking rice in Dodoma, Tabora, Singida, Shinyanga and Mbeya regions. Aerial control of roosts using a DLCO-EA aircraft was in progress at the time this report was compiled. In Mozambique, QU birds were reported in Chokwe district in Gaza Province. Surveys for roosts and ground control operations were in progress at the time this report was compiled. QU incidences were not reported from other invasion or outbreak countries during this time (IRLCO-EA).

Forecast: QU birds will continue to be a problem to small grain cereal growers in Tanzania, Kenya, Mozambique and Zimbabwe where maturing grains will be at risk. Active surveillance and timely reporting and interventions remain essential (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 QQU colony can contain a million birds (very common) and is capable of consuming and destroying 6,000 to 10,000 kg of seeds/day, enough to feed 12,000-20,000 people for a day.*

Rodents: No rodent outbreaks were reported during April.

Forecast: As rodents remain a constant threat to cereal and other produces in many outbreak and invasion areas, active surveillance and preventive interventions remain essential (AELGA).

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 moderate rodent outbreaks and a period of lull. **End note.***

Front-line countries where ETOP outbreaks first occur are advised to remain vigilant. Invasion countries 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 should be encouraged to remain vigilant and report any ETOP sightings to field agents and other contact persons.

Inventories of National Acridid Pesticide Stocks

Pesticide inventories of the national crop protection departments slightly changed during April as control operations treated close to 22,000 ha in the SGR countries (see table below for estimated quantities of each country).

Mindful of the risk of pesticides becoming obsolete once passed their usability, ETOP-prone countries, particularly those with large inventories, but less likely to use them within a reasonable time period, are encouraged to test their stocks regularly and determine whether they should use, retain, share or discard them immediately.

AELGA encourages that all options be explored to avoid the risks that old stocks could pose to the human health, the environment, and non-target organisms as well as the huge financial and environmental burdens associated with disposal of obsolete and unusable stocks. Judiciously executed triangulations of usable stocks from countries with large inventories to countries with immediate needs result in a win-win situation.

It is worth mentioning that Mauritania, Senegal, Algeria and Morocco donated more than 120,000 litres of pesticides to Niger, Mali and Chad to assist with the SRG control operations during the

2012 locust campaign. Such actions are an example of a win-win situation where by donating countries are not only assisting receiving countries, but also helping themselves by avoiding human health risks and environmental contaminations as well as saving resource that could otherwise be wasted in costly obsolete pesticide disposal operations.

Note: *The core message of sustainable 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 quantities of ETOP pesticide in host-countries

Country	Quantities in '000 l/kg ^s
Algeria	1,197~
Chad	43.9
Eritrea	43.7~
Egypt	Data not available
Ethiopia	1.6+~
Libya	25
Madagascar	Data not available
Mali	208.8d~
Mauritania	161.6+~
Morocco	4,099~
Niger	45.00~
Oman	20
Senegal	156~
Saudi Arabia	Date not available
Sudan	462.97
NSD	860"
Tunisia	167.6~
Yemen	33.00 + .527 kg GM~

These quantities include ULV, EC and dust formulations
 ~ data not necessarily current
 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 003-5 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 (<i>Spodoptera exempta</i> - SEX)
AELGA	Assistance for Emergency Locust Grasshopper Abatement
AFCS	Armyworm Forecasting and Control Services, Tanzania
AfDB	African Development Bank
AME	<i>Anacridium melanorhodon</i>
APLC	Australian Plague Locust Commission
APLC	Australian Plague Locust Commission
CAC	Central Asia and the Caucasus
CBAMFEW	Community-based armyworm monitoring, forecasting and early warning
CERF	Central Emergency Response Fund
CIT	<i>Calliptamus italicus</i>
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	<i>Chortoicetes terminifera</i>
DDLC	Department of Desert Locust Control
DL	Desert Locust

<i>DLCO-EA</i>	<i>Desert Locust Control Organization for Eastern Africa</i>	<i>L</i>	<i>Liter (1.057 quarts or 0.264 gallon or 33.814 US fluid ounces)</i>
<i>DMA</i>	<i>Dociostaurus maroccanus</i>	<i>LMC</i>	<i>Locusta migratoriacapito</i>
<i>DPPQS</i>	<i>Department of Plant Protection and Quarantine Services</i>	<i>LMM</i>	<i>Locusta migratoria migratorioides (African Migratory Locust)</i>
<i>DPV</i>	<i>Département Protection des Végétaux (Department of Plant Protection)</i>	<i>LPA</i>	<i>Locustana pardalina</i>
<i>ELO</i>	<i>EMPRES Liaison Officers</i>	<i>MoAFSC</i>	<i>Ministry of Agriculture, Food Security and Cooperatives</i>
<i>EMPRES</i>	<i>Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases</i>	<i>MoARD</i>	<i>Ministry of Agriculture and Rural Development</i>
<i>ETOP</i>	<i>Emergency Transboundary Outbreak Pest</i>	<i>NOAA</i>	<i>National Oceanic and Aeronautic Administration</i>
<i>Fledgling</i>	<i>immature adult locust /grasshopper that has pretty much the same phenology as mature adults, but lacks fully developed reproductive organs and hence cannot breed</i>	<i>NSD</i>	<i>Republic of North Sudan</i>
<i>GM</i>	<i>Green Muscle (a fungal-based biopesticide)</i>	<i>NSE</i>	<i>Nomadacris septemfasciata</i>
<i>ha</i>	<i>hectare (= 10,000 sq. meters, about 2.471 acres)</i>	<i>OFDA</i>	<i>Office of U.S. Foreign Disaster Assistance</i>
<i>IRLCO-CSA</i>	<i>International Red Locust Control Organization for Central and Southern Africa</i>	<i>PHD</i>	<i>Plant Health Directorate</i>
<i>ITCZ</i>	<i>Inter-Tropical Convergence Zone</i>	<i>PHS</i>	<i>Plant Health Services, MoA Tanzania</i>
<i>ITF</i>	<i>Inter-Tropical Convergence Front = ITCZ)</i>	<i>PPD</i>	<i>Plant Protection Department</i>
<i>FAO-DLIS</i>	<i>Food and Agriculture Organizations' Desert Locust Information Service</i>	<i>PPSD</i>	<i>Plant Protection Services Division/Department</i>
<i>Hoppers</i>	<i>young, wingless locusts/grasshoppers (Latin synonym = nymphs or larvae)</i>	<i>PRRSN</i>	<i>Pesticide Risk Reduction through Stewardship Network</i>
<i>Hopper bands</i>	<i>groups of hoppers marching in unison in the same direction</i>	<i>QQU</i>	<i>Quelea quelea</i>
<i>Kg</i>	<i>Kilogram (~2.2 pound)</i>	<i>SARCOF</i>	<i>Southern Africa Region Climate Outlook Forum</i>
		<i>SGR</i>	<i>Schistoseca gregaria</i>
		<i>SWAC</i>	<i>South West Asia DL Commission</i>
		<i>TAG</i>	<i>Technical Assistance Group</i>
		<i>USAID</i>	<i>Unites States Agency for International Development</i>
		<i>UN</i>	<i>the United Nations</i>
		<i>ZEL</i>	<i>Zonocerus elegans, the elegant grasshopper</i>
		<i>ZVA</i>	<i>Zonocerus variegatus, variegated grasshopper (This insect is emerging as a fairly new dry season pest largely due to the destruction of it natural habitat through deforestation.)</i>

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