Emergency Transboundary Outbreak Pest (ETOP) Situation Report for April with a Forecast till mid-June, 2010

Summary

The Desert Locust (DL[1]) situation remained calm in April. Only small-size hopper bands and some immature adults were treated in 673 ha on the Red Sea coast in **Saudi Arabia**. A few solitary adults were reported in **Morocco** along the **Algerian** border and a solitary mature adult was detected near Agadez in northern **Niger**. Scattered third instar hoppers were reported in Ghat, **Libya** and isolated adults and hoppers were seen in **southern Yemen**. No locusts were reported in other outbreak and invasion countries during this period (CNLA/Niger, DDLC/Libya, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia).

Forecast: Escapee hoppers in coastal areas in **Saudi Arabia** will fledge and move to the interior of the country where breeding will likely occur during the forecast period. Small-scale breeding will also likely commence in May along the **Morocco** and **Algerian** border where solitary adults were detected earlier. Some solitary adults will begin appearing in the summer breeding areas in northern **Sahel West Africa**, **Sudan**, the interior of **Yemen** and along the **Indo-Pakistan** border but significant developments are not expected during the forecast period (CNLA/Niger, DDLC/Libya, DPPQS/India, FAO-DLIS, INPV/Algeria, PPD/Ethiopia).

OFDA Pest & Pesticide Activities

- OFDA/TAG Advisor participated in a planning workshop for the second phase of the EMPRES Western Region Program in Dakar during the second week of March, 2010.

Frontline countries in the Sahel West Africa, including **Chad**, **Mali**, **Mauritania** and **Niger** have established autonomous national locust control units (CNLA) in their respective countries. CNLAs are responsible for all DL activities and each unit is currently equipped with survey, monitoring, communication, transportation and application tools and materials. Pesticide warehouses, offices and field stations have been constructed or are under construction. DL staff has received training in various fields of locust operations in these countries. Funds from the African Development Bank and the World Bank as well as financial assistance made by the host-governments, USAID, France, and neighboring countries played an important role in enabling host-countries to overhaul their DL control units.

This is a significant improvement over the situation these countries were in during the 2003-05 locust upsurges and period to that. The most recent upsurges overrun the entire western outbreak region and extended to the Middle East mainly due to weak host-country capacities and lack of adequate resources to respond to the DL outbreak quickly and effectively.

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

- 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 and communities as well as to protect their assets and the environment. To date, OFDA/TAG has launched two sub-regional PRRSNs in eastern Africa and in the Horn. Similar initiatives are being discussed with partners in **Ghana** and C**RC/FAO** in **Cairo**.

- OFDA continues supporting capacity strengthening through FAO's EMPRES and pesticide disposal programs to prevent, mitigate and respond to DL emergencies and associated environmental risks.

- OFDA' contributed to FAO's initiative to strengthen national and regional capacities in Eastern Europe Central Asia, the Caucasus and neighboring counties (EECAC) to help coordinate locust monitoring and timely information sharing among neighboring countries. The ultimate goal of the initiative is to improve food security and livelihoods of vulnerable communities through preventing and mitigating locust threats.

- The USD 200,000 OFDA provided in seed money enabled FAO's Pesticide Disposal and Prevention program to leverage an additional USD 2.2 million (in cash and in kind) from the Global Environment Facility, Green Cross Switzerland, participating countries and other sources. These resources are used to help improve awareness and develop and strengthen national capacities to implement obsolete pesticide disposal and prevention programs in EECAC.

Other ETOPs

Red Locust: More than 520 swarms were detected during surveys carried out in late March and early April in **Ikuu** plains, **North Rukwa**, the **Malagarsi** basin and the **Wembere** plains in **Tanzania**. Close to 70,000 areas were surveyed by the International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA) and the **Tanzania** Plant Health Services; 30,000 ha were reported infested. Swarms were seen escaping from **Ikuu** to adjacent areas and mixed populations of late instar hoppers were detected in several places during this period (IRLCO-CSA).

Forecast: Swarms will likely continue migrating from **Ikuu** plains and invade cereal crops in **Rukwa**, **Kigoma** and **Kagera** regions of **Tanzania** and some could reach **Uganda**, **Rwanda**, **Burundi,** etc during the forecast period (IRLCO-CSA).

Note: The recent tragic *lose of two pilots and a survey/spray aircraft has forced IRLCO-CSA to outsource aerial spray operations through the Desert Locust Control Organization for Eastern Africa (DLCO-EA). This will likely continue straining IRLCO's ability to effectively serve its member-countries and contribute to food insecurity in the sub-region.* End note.

ETOPs in EECAC: The ETOP season has commenced in parts of the EECAC region, particularly in **Georgia** where the

Moroccan locust (*Dociostaurus maroccanus - DMA*) was reported infested more than 14,000 ha (FAO-ECLO). A late received report indicated that DMA started hatching in mid-March in **Tajikistan**, **Turkmenistan** and **Uzbekistan** and hoppers and bands were treated on some 52,880 ha. A similar situation may have occurred in **Afghanistan**. No locusts were reported elsewhere during this time. Joint cross-border surveys were planned between neighboring countries (FAO-AGPM).

Armyworm: No update was received at the time this report was compiled, but it is likely that the pest may have been a problem in **Tanzania** and **Kenya** and perhaps in southern **Ethiopia** where the pest could threaten crops and pasture.

Quelea birds: No update was received at the time this report was compiled, but it is likely that the bird may have been threatening irrigated crops in **Kenya** and elsewhere in the region.

Rodents: No update was received at this time, but the pest remains a threat to rice, oil palm and other crops in several places. Barn owl, *Tyto alba, is one of nature's biological means of controlling rodents.*

OFDA/TAG's Assistance for Emergency Locust and Grasshopper Abatement (**AELGA**) will continue monitoring ETOP situation in all regions and issue updates and advices. **End summary**

Detailed accounts of the ETOP situation and associated activities as well as the weather data across the various regions are presented below

This and other SITREPS can be accessed on our website at:

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

Weather and ecological condition

During the last week of April, heavy rains soaked **southern Somalia** and caused local flooding. Scattered showers resulted in above average rainfall in local areas in the **Greater Horn of Africa**. Light but unseasonable rains fell over **Botswana** and **northeastern Namibia**.

Rainfall was near or above average over parts of **central Ethiopia**, parts of northern **Somalia** and western **Kenya** during the fourth week of April. Rainfall was near or above average over parts of **Botswana**, central **Mozambique** and northern **South Africa**. Dry conditions resulted in moisture deficits over **Madagascar** as well as other parts of Africa.

Above average rainfall was recorded during the third week of April in **southern Somalia**, **southeastern Ethiopia**, parts of eastern and **western Kenya** and parts of **Uganda**. Good rain was recorded in Ghat in **Libya** during the second week of April. Above normal rainfall was recorded in the coastal areas of southern **Mozambique** and good rains were recorded in **Saudi Arabia** and **Yemen** in April (DDLC/Libya, FAO-DLCS, NOAA).

Dry spell with max T of ~ 43.4 - 47 C and min T ranging from 21.4 – 25.1 C prevailed during this period in the Scheduled Desert Area, in Rajasthan, North Gujarat, Saurashtra and Kutch in **India**. Only light showers were recorded in isolated places in

Rajasthan in April (DPPQS/India). Ecological conditions began improving in EECAC as temperatures started becoming mild and vegetation began greening (FAO-AGPM).

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***Extended forecast: May - October**:*

The forecast for May-June for the Sahel calls for an increased chance for below average rainfall over **western Sahel**. There is an increased chance for above average rainfall locally in the southern areas of Burkina Faso and Niger. In the northern Horn of Africa, there will be an increased chance for below average rainfall over local areas in **central** and **eastern Sudan**, and locally over **southwestern Ethiopia** during this period. An extended forecast for the period covering August to October predicts an increased chance for below average rainfall over **western Sahel**, **southeastern Niger**, and **central Chad**. There is an increased chance for above average rainfall locally over **southern Burkina Faso** and **southern Niger**, below average rainfall over most areas in **central** and **southern Sudan**, as well as **western Ethiopia** during this period (NOAA, 4/2010).

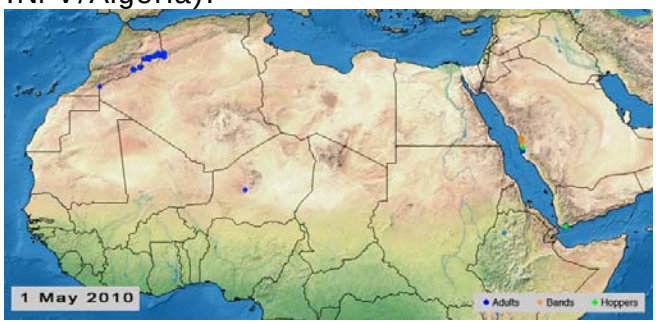
Note: The northward migration of the Intertropical Convergence Zone (ITCZ) continuous contributing to increased rainfall in several places. **End note.**

***Note**: Changes in the weather pattern and the shift in the ecology of landscape are believed to exacerbate the risk of pest outbreaks. Regular monitoring and reporting are essential at all times. **End note**.*

DL - Western Outbreak Region

Isolated solitary adults were detected in Morocco south of the Atlas and along the Algerian border. A solitary mature adult was seen in northern Niger near Agadez and scattered third instar hoppers were detected in Wade Titghsin (25 32 22.1N/09 55 37 6E) during surveys carried out in Ghat in **Libya**. No locusts were reported in other countries in the western region during this period (DDLC/Libya, FAO-DLIS, and INPV/Algeria).

Forecast: The DL situation will likely remain calm in the western outbreak region and only small-scale breeding will likely commence in May in **Morocco** along the **Algerian** border where adult locusts were detected earlier. Solitary adults will likely begin appearing in southern **Mauritania**, **Mali** and **Niger** during the second week of June and adult locust may persist in western and southwestern **Libya** near Gaht and Ghadames, but significant developments are not likely during this period (CNLA/Niger, DDLC/Libya, FAO-DLIS, and INPV/Algeria).



(Groups of hopper bands and immature adults were controlled near Rabigh on the Red Sea coast of Saudi Arabia, FAO-DLIS, 5/10)

DL - Central Outbreak Region

The DL situation remained fairly calm in the Central outbreak region in April. Only some hoppers and bands were developed from local breeding on the Red Sea coast of **Saudi Arabia** near Rebigh where ground team controlled hoppers and immature adults on some 673 ha. Small-scale breeding occurred on the southern coast of Yemen where isolated solitary mature adults and hoppers were seen. No locusts were reported in

other outbreak and invasion countries during this period (FAO-DLIS, PPD/Ethiopia).

Forecast: There is a slight chance of adult locusts moving from the coastal areas of **Saudi Arabia** and **Yemen** to the spring breeding areas in interior of the countries where small-scale breeding could occur during the forecast period. Solitary adult locusts may appear in the summer breeding areas in **Sudan** and perhaps **Eritrea**, but significant developments are not likely in these regions during the forecast period (FAO-DLIS, PPD/Ethiopia).

DL- Eastern Outbreak Region

No locusts were reported in spring breeding areas in southwest **Pakistan** and southeastern **Iran**. The Scheduled Desert Area of Rajasthan and Gujarat States in I**ndia** remained calm during this period (DPPQS/India, FAO-DLIS).

Forecast: Solitary adults may being appearing in the summer breeding areas in Rajasthan and Gujarat, **India**, but the situation in **western Pakistan** and **southeastern Iran** will likely remain clam during the forecast period (DPPQS/India, FAO-DLIS).

Other ETOPs

Red Locust:

In remembrance of the two pilots of the International Red Locust Control Organization for Central and Southern Africa (IRLCO-CRA) who lost their lives in a tragic plane crush in March 2010 while on duty in Kenya. With our deepest sympathy to the families and friends of the deceased!

Note: IRLCO-CSA has already starting feeling the impact of the recent tragic incidence on its ability to provide services to its member-countries. The organization had to outsource aerial operations and recently contracted a DLCO-EA aircraft to carry out survey and control operations in Tanzania. Mindful of unsustainability of such action, the organization is putting together an appeal to member-countries to pay off their dues and the international organizations and donors to assist with capacity strengthening to narrow the gap the tragedy has created. End note.

On April 13, 2010, the International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA) issued an alert on the red locust situation in **Tanzania** with a warning to neighboring countries. The alert reported the detection of more than 520 swarms ranging in size from half ha to 75 ha with up to 40 insects per meter square in **Ikuu plains**, **North Rukwa**, the **Malagarsi basin** and the **Wembere plains** (Figure 1) during surveys carried out between late March and early April.

Some locusts were reported escaping from **Ikuu** to **Kalema** and **Kabungu** in **Mpanda** districts in **Tanzania**. Mixed populations of 5^{th}-6^{th} instar hoppers with densities ranging from 20-50 individuals/m^2 were also observed in several places (Figure 2). IRLCO-CSA carried out the surveys in collaboration with the **Tanzania** Ministry of Agriculture, Food Security and Cooperatives (MAFSC) and covered more than 70,000 ha of which some 30,000 ha were reported infested (IRLCO-CSA).

MAFSC and IRLCO-CSA are tracking the [escapee] swarms from **Ikuu** as well as coordinating control operations. Ground teams are on the look out to implement control interventions as rapidly as possible.

Red Locust swarm seen on grasses near northern tree line in **Ikuu plain,** April 29, 2010 (source: IRLCO-CSA)

5th&6th instar RL hoppers on grasses in **Ikuu plain,** March 30, 2010 (source: IRLCO-CSA)

Forecast: Swarms will likely continue migrating from **Ikuu** plains and invade cereal crops in **Rukwa**, **Kigoma** and **Kagera** regions of **Tanzania**. Hoppers will fledge and form groups and escapee swarms will likely reach neighboring countries, including **Uganda**, **Rwanda**, **Burundi,** etc during the forecast period (IRLCO-CSA).

All concerned Ministries and personnel in **Tanzania** and neighboring countries should be on **high alert** and report any sighting of locust swarms to IRLCO-CSA to facilitate appropriate actions. Locust information should also be shared with neighboring countries as often as possible.

Moroccan, Italian Locusts in the **EECAC**

The ETOP season has commenced in parts of the EECAC region. According to a late report received, DMA started hatching as of mid-March in **Tajikistan**, **Turkmenistan** and **Uzbekistan** and hoppers and bands were treated on more than 52,800 ha through April 7th and a similar situation may be present in Afghanistan.

Early instar hoppers of DMA were also reported on more than 14,000 ha in south-eastern **Georgia** near the **Azerbaijan** border. This is an unexpected situation and the last time something like this happened was nearly 50 years ago! The current infestation has forced MoA/Georgia's to shift focus and resources from the **Italian locust** (a pest that is considered more serious and for which the Government of Georgia (GoG) allocates annual budget for a control operation often carried out in May and June.

MoA staff from **Georgia** and **Azerbaijan** recently conducted a joint meeting for joint survey and control operations. The group also advocated for a regional platform for future locust operations in the region. Other countries in the region remained calm during this period (FAO-AGPM).

While the amount of spring rainfall is critical for the developmental cycle of DMA and anthropogenic factors such as deforestation and overgrazing favor colonization, cultivated grasslands make it harder for the female insect that prefers undisturbed soil to lay eggs. Given the scale of the current infestation and the anticipated need for resources to respond to the potential invasion from the **Italian** locust, **Georgia** will likely request external assistance. As a matter of fact, GoG was in the process of issuing an appeal for emergency assistance at the time this update was compiled, which may initially target the UN and FAO (FAO-AGPM).

(a file photo of DMA - naturamediterraneo.com)

Australian Plague Locust (APL)

According to information received from the Australian Plague Locust Commission (APLC), spray aircraft treated adults and large bands of nymphs, some as wide as 800 meters marching across grassland. Hundreds of these bands were visible from the air at the time survey and spray operations were carried out. Many infested areas could not be controlled due to flooding and other constraints. Large numbers of swarms have moved into other parts of New South Wells, Victoria and South Australia and have begun laying.


(Australian plague locust, source: APLC)

Forecast: High density swarms will likely continue forming and laying eggs and ultimately resulting in extensive hopper developments in several regions. There is a likelihood of the pest threatening early cereal and fodder crops in autumn (additional information was not available on APL situation at the time this report was compiled).

The Timor and South Pacific

No update was received in April, but it is likely that grasshoppers and locusts continue to be active.

Armyworm: No update was received at the time this report was compiled, but it is likely that the pest may be a problem in **Tanzania** and **Kenya** and perhaps in southern **Ethiopia** where it threatens crops and pasture.

Quelled birds: No update was received at the time this report was compiled, but it is likely that the bird may have been threatening irrigated crops in **Kenya** and elsewhere in the region.

Facts: ***Quelled*** *birds can travel ~100 km/day looking for food. Each 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 rice, oil palm and other crops in several places. Barn owl, *Tyto alba, is one of nature's biological means of controlling the pest.*

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 and ELOs are encouraged to continue sharing information with partners and other stakeholders as rapidly and as often as possible.

Pesticide Stocks

Apart from the 673 ha treated in **Saudi Arabia** (base line data on pesticides still unavailable) no other spray operations were carried out during this period and thus, the inventory remained unchanged.

It is worth noting that some of the pesticides listed in the below box may have expired or will soon expire. Mindful of this, ETOP-prone countries, particularly those with large stocks, are encouraged to regularly test their stocks and determine whether they should be retained or should be used or immediate discarded. All options should be explored to avoid the huge environmental and financial cost associated with obsolete pesticides. When executed carefully, triangulation is a double-edged and safer alternative that can be considered.

Note: The core message of **pesticide stewardship networking** is to strengthen the national and regional pesticide delivery systems and contribute to the health and safety of vulnerable communities by protecting their environment, improving food security and ultimately contributing to the national economy. **End note**.

Country	Quantities in l/kg
Algeria	1,800,000~
Chad	108,085~
Eritrea	44,800~
Ethiopia	12,200
Mali	209,000%~
Mauritania	480,000~@
Morocco	4,105,300~
Niger	28,240+
Senegal	519,000~
Saudi Arabia	Data not available
Sudan	702,378[m]
Tunisia	167,600~
Yemen	Data not available

~ data not necessarily current
% Mali donated 21,000 l for RL in Malawi, ozambique 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
[m] This quantity includes EC, ULV and Dust rmulations available for all crop protection uses, including ETOPs

List of Acronyms

AELGA	*Assistance for Emergency Locust Grasshopper Abatement*
APL	*Australian Plague Locust*
APLC	*Australian Plague Locust Commission*
CAC	*Central Asia and the Caucasus*
CERF	*Central Emergency Response Fund*
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*
DDLC	*Department of Desert Locust Control*
DL	*Desert Locust*
DLCO-EA	*Desert Locust Control Organization for Eastern Africa*
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*
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)*
MoAFSC	*Ministry of Agriculture, Food Security and Cooperatives*
MoARD	*Ministry of Agriculture and Rural Development*
NOAA	*National Oceanic and Aeronautic Administration*
OFDA	*Office of U.S. Foreign Disaster Assistance*
PPD	*Plant Protection Department*
PPSD	*Plant Protection Services Division/Department*
PRRSN	*Pesticide Risk Reduction through Stewardship Network*
SWAC	*South West Asia DL Commission*
TAG	*Technical Assistance Group*
USAID	*Unites States Agency for International Development*
UN	*the United Nations*

For more information about our activities, the programs we support and many more, please, visit our website at:

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

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