

**Emergency Transboundary  
Outbreak Pest (ETOP) situation  
update for May with a forecast till  
mid-July, 2009**

## Summary

The desert locust situation remained active in May in northern **Somalia**, southern **Yemen** and parts of eastern **Ethiopia**. Breeding and new swarms were reported in northern **Somalia** and **Yemen**. Some swarms were seen moving in a northerly direction on the Somali plateau and escarpment and a few have crossed the border into adjacent areas in eastern **Ethiopia** where more than 552 ha were controlled up until early June mostly by air. Control operations also treated hopper bands and adults on 1,100 ha, 1,275 ha and 30 ha in May in northern **Somalia**, **Yemen** and **Saudi Arabia**, respectively. Other countries in the region remained fairly calm during this period (FAO-DLIS, PPD/Addis).



Swarms are forming in Yemen and N. Somalia and threaten other countries (FAO-DLIS, 06/09)

The western region remained fairly calm in May. Only small-scale breeding was reported in **Morocco** and **Algeria**. Ground control was undertaken against

mixed populations of hoppers and adults on close to 1,780 ha in **Algeria** during this period. No surveys were carried out and no locust were reported in Sahelian West Africa during this period.

Scattered immature adult locusts were reported in southeast **Iran** and control operations treated gregarious hoppers on 3,000 ha in May. Scattered immature and mature adults were also observed in western **Pakistan**. No locusts were reported in Rajasthan and Gujarat, **India**.

**Forecast:** More swarms are expected to appear in northern **Somalia** and possibly cross the Gulf of Aden and reach southern **Yemen** and **Oman** and then onto the summer breeding areas on the **Indo-Pakistan** borders. Others will likely move into eastern and northeastern **Ethiopia** and continue towards the northwest and reach summer breeding areas in western **Eritrea** and eastern **Sudan** (the Inter-Tropical Convergence Zone/the Inter Tropical Front which heralds the beginning of the rainy season in most areas will influence this situation). Swarms are also expected to form in the interior of **Yemen** and move into the central highlands and the southern coast and then proceed to **Pakistan** and **India** via **Oman**. Other countries in the region will likely remain fairly calm during the forecast period (FAO-DLIS, DLCO-EA, PPD/Addis, CNLAA/Morocco, INPV/Algeria, PPD/India,).

## OFDA Pest & Pesticide Activities

- OFDA's sponsorship of DLCO-EA's capacity strengthening activities for

DL emergency and other ETOP operations in Greater Horn of Africa has been extended and funds from this sponsorship are being accessed to support ongoing locust survey and control interventions in **Ethiopia** and northern **Somalia**.

- OFDA is sponsoring capacity strengthening through FAO's EMPRES programs to prevent, mitigate and respond to DL emergencies.
- OFDA/TAG continues its initiatives in **pesticide risk reduction** (PRR) through stewardship network to ensure the safety of vulnerable communities and their environment in countries where the need and readiness are evident. TAG launched a successful PRR workshop in **Tanzania** in May 2008. The country has since elevated the Network through the Ministry of Agriculture to improve the national pesticide delivery system. A similar initiative is in progress in **Ethiopia** and actions are being taken to extend it to **Kenya** and other countries.
- OFDA co-sponsored assessment and project development missions for locust operations in Central Asia, the Caucasus and neighboring countries (EECAC). The assessment has enabled FAO to develop a technical assistance project for the sub-region.

- OFDA seed money to FAO's pesticide disposal and prevention program helped leverage more than \$2.2 million from GEF funds and other sources. These funds are being used to develop/ implement obsolete pesticide disposal and prevention initiatives/activities in EECAC countries.

### Other ETOPs

Significant concentrations of **Red Locust** were detected in Iku plains, Katavi plains, Malagarasi and Rukwa Valley outbreak areas, **Tanzania** during surveys that covered more than 400,000 ha in May. Adult locusts were controlled using Green Muscle (*Metarhizium anisopliae*) in Iku plains and with a conventional pesticide in Malagarasi Basin. Similar operations will continue in Rukwa Valley and Katavi plains. RL populations persisted in Buzi-Gorongosa and Dimba plains in **Mozambique** and control operations are being planned. Isolated populations persisted in flooded areas in the Lake Chilwa and Lake Chiuta plains along common borders of **Mozambique** and **Malawi** actions are being contemplated by IRLCO-CSA and MoAs in these countries (IRLCO-CSA).

**African Armyworm** activities were not reported in May and significant developments are not expected during the forecast period (AELGA, IRLCO-CSA, DLCO-EA).

**Quelea** activities were reported in several regions in **Tanzania** where close to 17 colonies were controlled by DLCO-EA spray aircraft with pesticides provided by the MoA. Control operations protected

finger millet, bulrush millet and irrigated rice. *Quelea* activities were also reported in southern **Malawi** and control operations were carried out in southern **Zimbabwe** but details were not available at the time this report was compiled. IRLCO-CSA and the Ministry of Agriculture in **Mozambique** carried out surveys to identify spray targets in Chokwe District, Gaza Province for early June interventions. *Quelea* birds will likely continue posing a threat to small grain crops (sorghum, millets, rice..) in **Kenya, Mozambique, Tanzania** and **Zimbabwe** DLCO-EA, IRLCO-CSA, AELGA).

**OFDA/Assistance for Emergency Locust and Grasshopper Abatement (AELGA) will continue monitoring situation and advise as often as necessary. End summary**

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

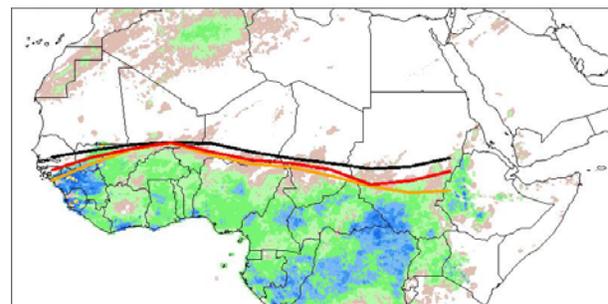
[http://www.usaid.gov/our\\_work/humanitarian\\_assistance/disaster\\_assistance/locust/](http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/locust/)

**Weather and ecological conditions**

During the third dekad of May, the African portion of the Intertropical Front (ITF) was located at around 13.0N, more than one degree south of the normal position for this time of the year and close to one degree south of the same position in 2008 (see graphic plots). The ITF continues to be significantly suppressed across much of Africa. In the west, the current position is 1.7 degrees south of the historical average of around 13.0N and in the east its current position is closer to the historical average position of 14.5N.

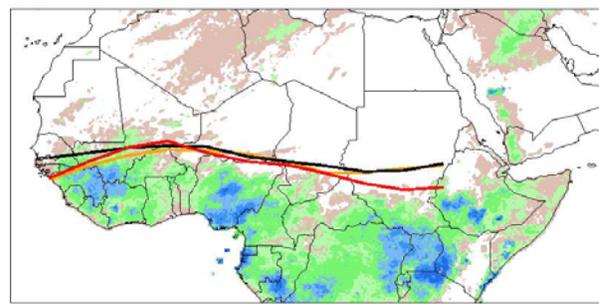
The Front was located at around 12.3N degrees during the second dekad of May, slightly lower than the previous dekad and 1.1 degrees south of the average for this time of the year and 1.6 degrees south of the same position in 2008. During the first dekad of the month, the Front was located at around 12.8N degrees north latitude. This is near the average for that dekad. Its position was closer to the normal position over much of Eastern Africa, but slightly lower in the far western portion and hence produced substantial precipitation in the east, particularly in northern **Somalia** and eastern **Ethiopia** during the second dekad of the month and below normal precipitation in most of the western outbreak areas for the month. Rains were also reported in the RL outbreak areas in **Tanzania** in May (NOAA, AELGA, FAO-DLIS, IRLCO-CSA).

**Current vs Mean Position of the Africa ITF**  
As analyzed by the NOAA Climate Prediction Center  
**May 2009 Dekad 3**



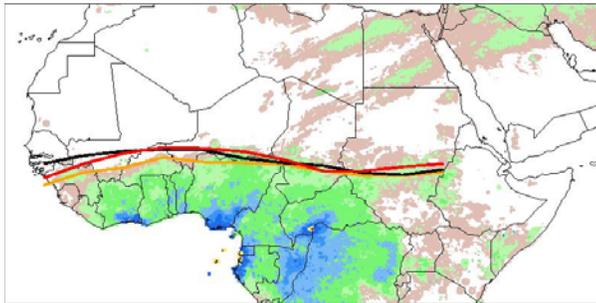
ITF position during 21-31 May, 2009 (NOAA)

**Current vs Mean Position of the Africa ITF**  
As analyzed by the NOAA Climate Prediction Center  
**May 2009 Dekad 2**



ITF position during 11-20 May, 2009 (NOAA)

**Current vs Mean Position of the Africa ITF**  
As analyzed by the NOAA Climate Prediction Center  
May 2009 Dekad 1



Accumulated Dekadal Precipitation:  
 < 10 mm (lightest green), 10-25 mm (light green), 25-50 mm (medium green), 50-75 mm (darker green), 75-100 mm (dark green), 100-150 mm (light blue), 150-200 mm (medium blue), 200-250 mm (dark blue), > 250 mm (darkest blue).  
 Current 10-Day Average (red line), Mean 10-Day Average (black line), Previous 10-Day Average (orange line).  
 (ITF position during 1-10 May, 2009 (NOAA))

**Detailed Account of ETOP Situation and Activities**

**DL - Western Outbreak Region**

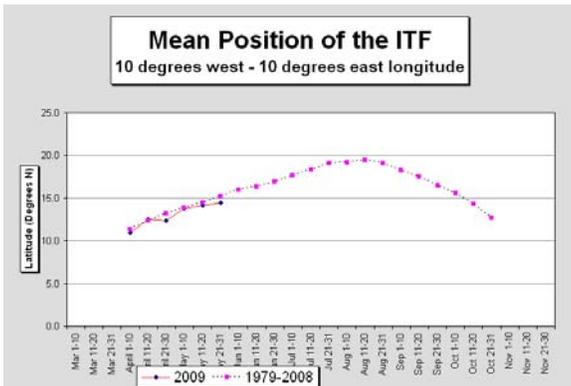
The DL situation remained calm in the western outbreak region in May. Small-scale breeding was reported in **Morocco** and in central Sahara in **Algeria**. Ground operations controlled hoppers and immature adults on close to 1,780 ha in **Algeria**. No surveys were carried out and no locusts were reported in the Sahel West Africa (CNLAA, FAO-DLIS, INPV, OFDA).

**Forecast:** Small scale breeding may occur in areas of precipitation in the summer breeding areas in the Sahel, but significant developments are not likely and the ongoing locust development in the central region is not expected to pose a threat to the western region (AELGA, FAO-DLIS, INPV, CNLA, CNLAA).

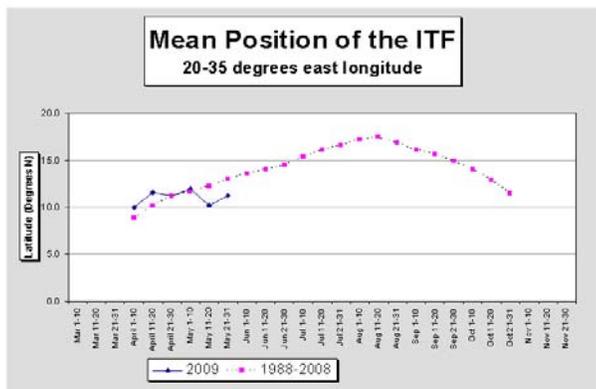
**DL - Central Outbreak Region**

The desert locust situation remained active in May in northern **Somalia**, southern **Yemen** and parts of eastern **Ethiopia**. Breeding was reported in **Yemen** and northern **Somalia** and new swarms were detected in both areas. Some swarms in northern **Somalia** are moving in northerly direction on the Somali plateau and escarpment and a few have crossed the border into eastern **Ethiopia**.

In **Ethiopia**, surveys covered close to 164,329 ha in Dire Dawa, Oromya and Somali regions in May. Immature adult swarms and hopper bands were controlled on more than 552 ha up until June 1st, most of them by DLCO-EA aircraft. Similar operations were conducted in several places in northern **Somalia** where hopper band measuring 15 ha each were scattered over 200 ha at Osoli (102730N/434234E), northern **Somalia**. On May 22nd, DLCO-EA



West Region - 10W-10E longitude



East Region - 11E-35E longitude

*(Note: The changes in the weather patterns and the shift in the landscape likely escalate the risk of pest outbreaks. Regular monitoring and reporting are essential. End note).*

controlled 4th and 5th instar DL hopper bands on 570 ha at 094500N/044200E, 20 miles northwest of Hargeisa, Somalia using 30 kg of Green Muscle (a fungal-based biopesticide). On May 20th, 20 medium density 4<sup>th</sup> and 5<sup>th</sup> instar bands each measuring about 15 ha scattered over 300 ha were controlled. On May 12th unconfirmed hatching was reported at several locations in northern **Somalia**. The report, which traced back its sources to local radio stations and travelers in **NS** listed the following as the hatching sites: Aeilahaley, Lafarug (0959N/4445E), Karure (1044N/4334E), Kalawle, Garbo, Haji Hussein, and Osoli. A total of 1,100 ha were sprayed in **northern Somalia** in May. Control operations were also carried out against hoppers and immature adults in about 30 ha on the red Sea coast of **Saudi Arabia** and on close to 1,275 ha in **Yemen** during this month.

**Forecast:** More swarms are expected to appear on the plateau in northern **Somalia** where good rain was recorded in May. Others will possibly cross the Gulf of Aden and reach **Yemen** and **Oman**. From there, they could continue on to the summer breeding areas on the **Indo-Pakistan** borders. Some swarms could also move into the northern Rift Valley of **Ethiopia** and continue towards the northwest and possibly reach summer breeding areas in **Eritrea** and **Sudan** following the Inter Tropical Front which heralds the beginning of the rainy season. Swarms are expected to form in the interior of **Yemen** and likely move into cropping areas in Wadi Hadhramaut and the central highlands while others could move to the southern coast and then towards **Pakistan** and **India** via **Oman** (FAO-DLIS).

**Note:** In 2007/08, swarms that originated in northern **Somalia** and **Yemen** and were later reinforced in the **Ogaden** region (a hard to reach area) invaded eastern and

southern **Ethiopia** as well as northern **Kenya** in numbers that were last seen almost half a century ago. Thus, it is important that vigilant surveys, monitoring and preventive interventions are implemented to avoid any unexpected surprises. **End Note.**

### DL- Eastern Outbreak Region

Scattered immature adult locusts were reported in southeast **Iran** and 2nd instar gregarious hoppers were controlled on 3,000 ha in May. Scattered adult locusts were also observed in western **Pakistan**, but did not warrant control operations. No locusts were detected during surveys carried out in Jodhpur, Jaisalmer, Barmer, Bikaner, Phalodi, Jalore, Nagaur, Suratgarh, Churu, Bhuj and Palanpur of the Scheduled Desert Area (SDA) of Rajasthan and Gujarat States, India. Ecological conditions continued to be unfavorable and o locusts major developments are expected in the coming months (FAO-DLIS, PPD/India).

**Forecast:** Small-scale breeding may be seen in areas of recent rainfall in Baluchistan, **Pakistan** and southeast coast of **Iran** during the forecast period. The rest of the region will likely remain calm during the forecast period (FAO-DLIS, PPD/India). However, active monitoring are essential especially in areas of recent rainfall

### Central Asia and the Caucasus

No reports of **Italian** or **Moroccan** or Migratory locusts were received from the CAC region in April.

**Forecast:** **Moroccan** locust will likely continue appearing in northern **Afghanistan** and adjacent areas during the forecast period. Vigilant survey and monitoring are essential.

Significant populations of **Red Locust** (5-30 insects/m sq) were detected over 23,300 ha during surveys carried out on more than 400,000 in Iku plains, Katavi plains, Malagarasi and Rukwa Valley outbreak areas, **Tanzania** by IRLCO-EA in May. Adult locusts were controlled using Green Muscle (*Metarhizium anisopliae*) in Iku plains (sensitive area) and Sumicombi Alpha 500 (a combination of fenithrothion 490 g and esfenvalerate 10g) was used in Malagarasi Basin. Control operations will continue on Rukwa Valley and Katavi plains (IRLCO-EA).

Medium density RL populations persisted in Buzi-Gorongosa and Dimba plains in **Mozambique** where control operations need to be conducted to save crops in areas adjacent to Buzi-Gorongosa and Dimba plains. Isolated populations persisted in flooded areas in the Lake Chilwa and Lake Chiuta plains along **Mozambique** and **Malawi** borders (IRLCO-CSA).

**Forecast:** As the rainy season ends, vegetation will continue drying up and the seasonal grass burning commences in the RL outbreak areas, locusts will be forced to congregate and form high concentrations of populations and swarms in patches of green vegetation. This situation will likely occur in several places, including Buzi-Gorongosa and Dimba plains of **Mozambique** where locusts were detected earlier. IRLCO-CSA, in collaboration with the Ministries of Agriculture in **Malawi**, **Mozambique** and **Zambia** and with support from UN-CERF project funds through FAO, plans to undertake intensive aerial surveys and control operations during the month of July.

IRLCO-CSA is also targeting to treat 7,000 ha in Iku plains with a biological pesticide, Green Muscle, and 9,000 ha with Sumicombi Alpha 500, and Sumithion 96%

in North/South Rukwa plains and Katavi plains in **Tanzania** in early June. Surveys will be carried out in Wembere plains and Bahi Valley to confirm the presence of RL populations and then launch control interventions (AELGA, IRLCO-CSA). It will also launch aerial surveys covering an estimated 225,000 ha in Kafue flats, Mweru wa Ntipa plains, Kazungula and Lukanga Swamps in June and July 2009.

### The Timor and South Pacific

No update was received at the time this report was compiled but it is likely that migratory locusts start posing a threat to crops and pasture.

### Australian Plague Locust

No info was received on the **Australian Plague Locust** (APL) at the time this report was compiled.

**African Armyworm.** Armyworm activities were not reported in spring outbreak areas in May.



Armyworm larvae (photo: Namibia crop pests #28)

**Forecasting:** Significant activities are not expected during the forecast period, but survey, monitoring and timely reporting [engaging community-forecaster, where available] are advisable.

**Quelea** activities were reported in Dodoma, Manyara, Mbeya, Musoma, Mwanza and Singida regions of **Tanzania** where more than 17 colonies were controlled on more

than 600 ha by DLCO-EA spray aircraft. Pesticides were provided by MoA in **Tanzania**. Control operations protected finger millet, bulrush millet and irrigated rice. IRLCO-CSA and the Ministry of Agriculture in **Mozambique** carried out surveys to identify spray targets in Chokwe District, Gaza Province and commence control operations by June. *Quelea* activities were reported in southern **Malawi** and control operations were carried out in southern **Zimbabwe** but details were not available at the time this report was compiled.

**Forecast:** *Quelea* birds will continue being a problem to small grain cereals (wheat, rice, sorghum and millet) in **Kenya, Mozambique, Tanzania** and **Zimbabwe** (AELGA, DLCO-EA, IRLCO-CSA).

Front-line countries in ETOP outbreak zones are advised to remain vigilant. Countries in the invasion zones should continue to strengthen their capacity to avoid any unexpected surprises. DLCO-EA, IRLCO-CSA, national PPDs/DPVs and autonomous locust units and ELOs are encouraged to continue sharing ETOP related information with partners and stakeholders as often as possible.

### Pesticide Stocks

Pesticide inventories remained unchanged in May in most of the outbreaks/invasion countries with the exception of **Algeria**, **Yemen** and **Ethiopia** were limited operations were carried during this month.

Country	Quantities in l/kg@
Algeria	1,800,000**
Chad	108,085
Eritrea	44,800
Ethiopia	28,100~
Mali	209,000%

Mauritania	489,400
Morocco	4,107,300
Niger	69,000
Senegal	519,000
Saudi Arabia	??
Sudan	735,676
Tunisia*	167,600*
Yemen	
some of these pesticide have expired or will soon expire *Most current data not available **Most current data not available ~ this represents DL stock % Mali donated 21,000 l to RL operations in Malawi, Mozambique and Tanzania late last year and FAO facilitated the triangulation	

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