MADAGASCAR LOCUST UPDATE FOR THE FIRST DEKAD OF NOVEMBER, 2013 WITH A FORECAST FOR THE COMING DEKADS

METEOROLOGICAL AND ECOLOGICAL CONDITIONS

During the first decade of November, abundant rainfall was recorded in most of the Malagasy locust zones in several. As a result green (grass) vegetation coverage of 75 to 80% with a plant height of 15-20 cm and a recovery rate of about 40-45% and an average depth of 25 cm moist sandy clay soil were reported in some of the invasion areas. In the gregarizarion areas, vegetation coverage of 70 to 75% and a recovery rate of 30-40% were observed with an average depth of 20 cm soil moisture. The central densation and the extreme western part of the country received little or no rain during this period. The trajectory of the prevailing winds was westerly to easterly (see map: FEWS, DPV-FAO-LWU).

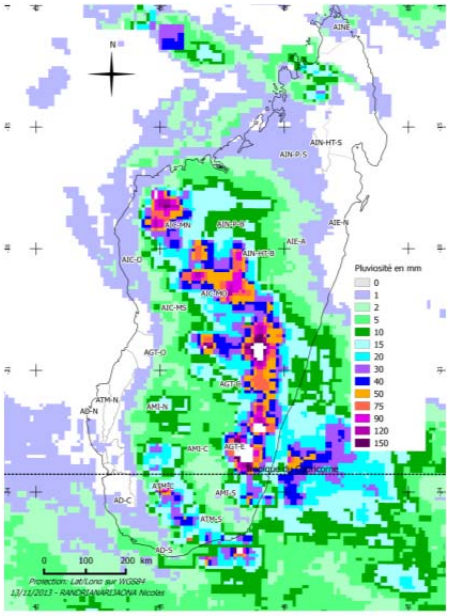


Table 1. Key rainfall data in various locust zones in Madagascar during dekad 1 of November (DPV-FAO-LWU, 11/2013)

Locality	Rainfall mm	Locust zone
Zazafotsy South	46.60	Central Initial Multiplication Area (CIMA)
Ankomanga	38.70	CIMA
Ianakafy	32.60	CIMA
Isoanala	31.60	CIMA
Andiolava	22.80	CIMA
Ianabinda	21.10	CIMA
Ampihamy	22.50	North-West Transitional Multiplication Area (NWIMA)
Fotadrevo	48.00	Central Transitional Multiplication Area (CTMA)
Ejeda	34.70	CTMA
Tranoroa	21.70	CTMA
Sakaraha	21.60	CTMA
Betiyok South	21.20	CTMA
Tsiombe	62.50	CTMA-SOUTH
Tranomaro	38.40	CTMA-SOUTH

Ambovombe	24.00	CTMA-SOUTH
Antaritaika	68.60	Southern Densation Area (SDA)
Marovato	64.70	SDA
Ambazoa	59.60	SDA
Marolinta	37.50	SDA

LOCUST SITUATION

Teams of experts stationed at the Tsiroanomandidy operational base reported bands composed of 1st to 3rd instar gregarious hoppers of the Malagasy locust in the vicinity of Tsiroanomandidy in the valleys and higher grounds in Mahakilo basin in the Mid-East Central Invasion Areas. The bands were detected on an estimated 18,800 ha in Maroahita and Ambatobe. Phase transitioning 1st and 2nd instar hopper bands were detected in Ampoza in the Betsiriry Plain and South Morafenobe in the Mid-East Central Invasion Areas during this period.

Locusts were also reported in Andiolava, West Sakaiza (Ihosy) in the Central Transitional Outbreak Areas (CTMA). Low density adults and solitary 3rd to 5th instar hoppers were observed in Befandriana South in the northern sector of the Transitional Multiplication Areas. Low density immature adults were also observed in Ejeda and Beahitse. In Vavalovo, in the Central Initial Multiplication Area (CIMA), the presence of medium density (10-50 insects/m^2) solitary and transient, 3rd to 4th instar hoppers was confirmed by the locust operation team in Ihosy Base. The hopper bands were 25 to 100 m^2 and covered 1,000 ha in total. Hoppers and adults covering 230 ha were also detected in these areas.

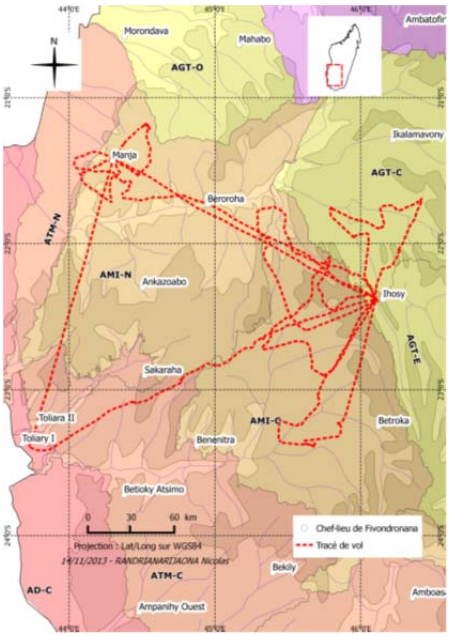
Adult locusts and hoppers were reported in Sahamandrevo, Mahatalaky (Jangany) Ianakafy and Analamary in CIMA where mating, egg-laying as well as 1st–3rd instar hopper groups continued appearing. Locusts were detected in Soahazo, Ankaraobato, the surroundings of Tsiroanomandidy and Morafenobe over some 2,630 ha in the outbreak area and 18,800 ha in the invasion areas. No locusts were reported in the densation areas during this period.

The National Locust Control team reported the presence of low density (10-400 insects/ha) solitary transient populations of mature and immature Red

Locust in Antsohihy in North Befandriana, Marotandrano and Port-Bergé in the North-West Invasion Areas (DPV-FAO-LWU).

AERIAL SURVEY

Aerial surveys by the two FAO-leased helicopters covered 25h 28m – Base 1 Ihosy (17h 37m) and Base 2 Tsiroanomandidy (7h 51m) during this dekad (Maps below: (L) Flight track for the helicopter stationed in Ihosy (Base 1), and (R) flight track and areas treated and protected by the second helicopter stationed in Tsiroanomandidy (Base 2) (so far, 62h and 32m of aerial surveys have been logged by DPV-FAO-LWU).



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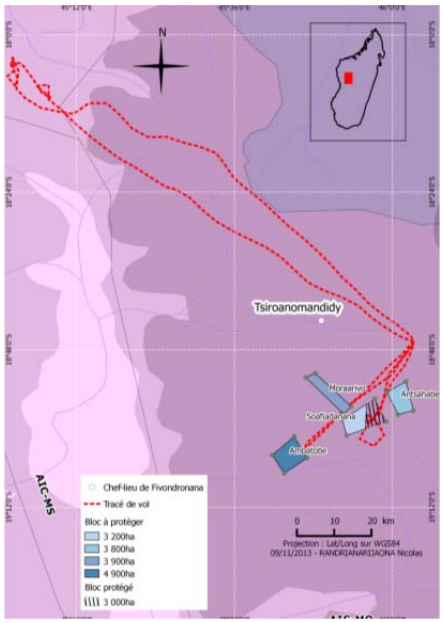

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CONTROL OPERATIONS

Aerial control operations commenced during the first dekad of November. Hoppers and adult locusts were controlled on 4 ha by air in Vavalova locality in the Ihosy Locust Zone of the Eastern Transitory Gregarization Area. Three and a half liters of Chlorpyrifos 240 ULV was used to control the locusts and helicopter 2 in Tsiroanomandidy Base was employed to control the locusts. Six hundred liters of NOMOLT (Teflubenzuron), an insect growth regulator, was also applied by air as a barrier treatment to protect 3,000 ha in Bongolava Zone in Soafiadanana (in the Mid-West Initial Concentration Areas). Aerial control operations will continue during the coming dekads and months. Given that for the most part, locusts develop in their natural habits

during the initial breeding season, significant crop damages have not been reported during this time.

SUPPLIES AND EQUIPMENT

Pesticides:

Large quantities of pesticide stocks have been pre-positioned in various strategic locations: Toliara, Befandiriana South, Ihosy, Manja, Sakaraha, Miandrivazo, and Morondava. As of the first dekad of November, **168,156.5** l/kg of pesticides (Chlorpyrifos 240 ULV, Teflubenzuron 50 UL (40,000 l of IGR were received on November 5th) and *GreenMuslce*) have been reported available. An additional **494,640** liters of pesticides are expected to arrive in the country over the next three months (DPV-FAO-LWU).

Aircraft: So far, two helicopters have been leased by FAO.

Vehicles: Thirteen 4X4 double cabin light trucks have been acquired for the campaign. As of the last dekad of October, eight tracks have been deployed to Ihosy and Tsiroanomandidy operational air bases.

ENVIRONMENTAL MONITORING AND CONTROL

During the first dekad of November, 3, 200 L empty pesticide containers were retrieved in Tsiroanimandidy Base for safer management/disposal.

FORECAST

Given the favorable ecological conditions, sexually mature adult locusts will continue breeding in the outbreak and gregarization areas and infest several places in the coming dekads.

Vigilance, aggressive surveillance, monitoring and preventive interventions remain imperative to avert any major crop damage down the road.

OFDA/TAG will continue monitoring the situation closely and issue updates and advices as often as necessary.