Designed on the ground, proven in the air

Drone spraying

Find the areas that need treating, then treat them precisely, with less product. We have done this against malaria mosquitoes for the PMI VectorLink programme. We offer the same method against locusts.

AGAINST MALARIA: THE PMI VECTORLINK PROGRAMME

For the PMI VectorLink programme, funded by the President's Malaria Initiative (USAID) and run by Abt Associates, AerialMetric mapped mosquito larval habitats around villages by drone, then treated them by drone with a biological larvicide, Bti (*Bacillus thuringiensis israelensis*).

Map. Around the main village of each selected fokontany, an area of about 500 hectares is photographed at high resolution.
Delineate. On these images we outline the larval habitats and calculate their surface area. The programme's entomologists validate the areas to be treated.
Treat. Spraying drones treat the validated habitats, twice a month during the campaign.
Report. Flight permits, day-by-day planning validated with the programme, a report for each campaign.

PROGRAMME SUMMARY

PERIOD
2021-2023

CLIENT
Abt Associates, which runs the PMI VectorLink programme

FUNDED BY
President's Malaria Initiative (USAID)

AREAS
Ankazobe (Analamanga) and Morombe (Atsimo-Andrefana) districts; 39 fokontany in the first phase, 17 in Morombe in 2022-2023

AERIALMETRIC'S ROLE
Larval habitat mapping, flight permits, drone spraying, reporting

PRODUCT
Bti biological larvicide

AGAINST LOCUSTS: WHAT WE OFFER

Monitor: know where to look — High-resolution mapping, with our long-range S330 drone, of areas suitable for breeding, which turn green after the rains. Risk maps guide survey teams and are checked against ground truth.

Treat: precisely, with less product — Agricultural drones fitted with ultra-low-volume (ULV) atomisers. Compatibility is checked product by product, biopesticides included, in line with product approvals. Only confirmed infestations are treated; dose and drift are measured.

A method already in use — Map, target, treat, report: the PMI VectorLink method, to be transferred to the national control teams.

WHAT OUR FLEET CAN TREAT

16 ha/h
per spraying drone
maximum capacity in favourable conditions

1,280 ha/day
with 10 drones, our current fleet
8-hour flying day

3,840 ha/day
with a fleet expanded to 30 drones
8-hour flying day

START WITH A MONITORING PILOT

Choose the area — An accessible area with a history of locust activity, just after the rains; a target area and a control area, chosen with the national teams.

Fly — Two to three days of S330 flights with an optical payload, from a single base.

Deliver — High-resolution orthophoto, map of greening and suitable areas, performance note: resolution, area covered per day, turnaround.

Compare — Results validated against the national teams' ground truth; speed, cost and effectiveness compared with current means. The pilot does not promise to find hopper bands if there are none: its value does not depend on locusts being present.

Then treat — Ground characterisation of the atomiser's droplets, to the control organisations' parameters, before any real treatment. After technical, regulatory and environmental approval, a service supporting the national preventive control system.