Drone Application of Larvicides in Madagascar
Objective

• Assess the feasibility of larval source management (LSM) as a complementary vector control tool to LLINs in Madagascar from 2021 to 2023.

• Does complementary LSM of aquatic habitats / rice fields in combination with pyrethroid-only LLINs provide additional control of malaria vectors in Madagascar by reducing larval and adult densities?

• Does complementary LSM reduce transmission of malaria?
General Overview

• SIEE (Supplemental Initial Environmental Examination) approved

• Mapping through Geospatial assessment of the presence / absence of larval habitats and quantification of the area of larval habitats
  – Ensure that the appropriate volume of larvicide is acquired by VectorLink and used to cover the entire water surface.

• Larviciding via drones in 2 districts with high malaria prevalence where irrigated rice fields are common larval habitats
  – Morombe (6 fokontany)
  – Ankazobe (11 fokontany)

• Using Bti (Bacillus thuringiensis israelensis) on vector populations

• All breeding sites located within 1 km of the fokontany

• Frequency of larviciding: twice a month
Map of Intervention Areas
Entomological Monitoring:
- Density of adult *Anopheles* indoors and outdoors using human landings captures (HLC) and CDC light traps
- Human biting rates
- Larval density
- Sporozoïtes rates

Epidemiological Monitoring:
- Malaria Case Incidence based on the number of cases confirmed using rapid diagnostic tests (before and after the intervention)

Evaluate the cost, logistics and cost-effectiveness of LSM in Madagascar

Qualitative Study for the Acceptability of LSM
- Collect data on perceptions and behaviors of the target population
VectoBac WDG Storage
Advocacy Meetings
Mobilization Activities
Entomology Activities
Challenges