



# Target Malaria: Ghana

## Who we are?

Target Malaria is a not-for-profit research consortium that aims to develop and share new technologies for malaria control. The University of Ghana, Legon is a collaborating partner.

## Our work

Target Malaria's vision is to contribute to a world free of malaria.

Our approach is malaria control by mosquito control. By reducing the population of malaria mosquitoes, we aim to reduce the transmission of the disease.

We aim to develop a technology that can be complementary to other mosquito control methods and which offers a solution that is long term, cost-effective and sustainable.

**Target Malaria includes institutions in Africa, Europe and North America. The project is currently working in three African countries:**

- Ghana: University of Ghana
- Burkina Faso : Institut de Recherche en Sciences de la Santé (IRSS)
- Uganda: Uganda Virus Research Institute (UVRI)
- Researchers in the UK, US and Italy are also involved

## Context

Malaria is both endemic and perennial throughout Ghana, putting the entire population at risk and placing a heavy burden on Ghana's public health system and economy.

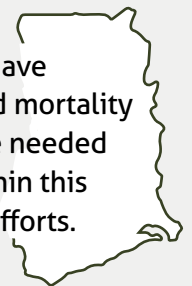
Out of Ghana's population of 32,8 million people, 5,396,000 were infected in 2021. (WHO, World Malaria Report, 2022)



There were an estimated **5,3 millions cases of malaria** and **11,557 deaths** in Ghana in 2022.

(WHO estimates, World Malaria Report 2023)

Current efforts to tackle malaria have reduced deaths but morbidity and mortality remains high. Additional tools are needed and Target Malaria is working within this context to complement existing efforts.



## Our activities in Ghana



### Insectary & laboratory

Target Malaria Ghana has built an insectary and laboratory space to enhance infrastructure for mosquito research in a manner consistent with internationally recognised practice. We will use this laboratory space to investigate optimal rearing conditions that enhance male mosquito fitness.



### Ecological observatory

This project focuses on the community ecology surrounding *Anopheles gambiae*. It will allow the construction of quantitative ecological networks surrounding *Anopheles gambiae* and aid in making predictions regarding the impact of eliminating or reducing this species on the rest of the ecosystem. Activities include:

- Identifying and characterising niches, as well as the interactions within the niches.
- Unravelling of the role of *Anopheles gambiae* in food webs and the provision of ecological services.
- Investigating whether mosquitoes pollinate plants and which kinds of plants they pollinate.
- Using the data produced from above to predict what could happen to other life forms if malaria mosquito populations were significantly reduced.



### Stakeholder Engagement

- Inform and engage stakeholders around the insectary, in the two project communities, at the district, regional and national levels about the project activities to ensure transparency and agreement.
- Feedback to stakeholders about project progress and activities taking into account their views, opinions and concerns.
- Assuring stakeholders that their concerns are taken into consideration.



### Entomology

#### Mosquito Rearing and Male Fitness studies of *Anopheles gambiae* complex

This study aims to develop protocols for rearing, transporting and releasing male mosquitoes.

- Develop larval rearing conditions that maximise the survival of mass-produced *Anopheles gambiae* males.
- Test rearing protocols that boost male mating competitiveness and mate choosiness.
- Improve methods for packaging, transporting and releasing of mass-produced males to minimise negative effects on male survival and mating competitiveness.

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Read more on our webiste:

<https://targetmalaria.org/where-we-operate/ghana/>