

# Geographic Variation in Mampong, Ashanti Region and Axim, Western Region as a Correlation of Malaria Profile in Children under age 15

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# Outline

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UPPER VOLTA

UPPER EAST REGION

UPPER WEST REGION

Bolgatanga

Wa

NORTHERN REGION

Tamale

TOGO

IVORY COAST

Bulpe Port

VOLTA REGION

BRONG AHAFO

Kintampo Falls

Sunyani

Volta Lake

Krokoussa Hills Forest Reserve

ASHANTI REGION

Kumasi

Obuasi Goldmines

Lake Bosomtwi

Koforidua

Ho

Ankasa Resource Reserve

WESTERN REGION

EASTERN REGION

Kpong

Aburi Botanical Gardens

Greater Accra

CENTRAL REGION

ACCRA

Kakum National Park

Cape Coast

Sekondi

Takoradi

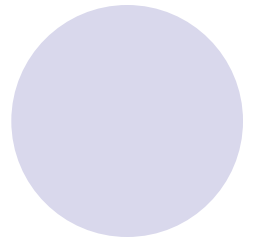
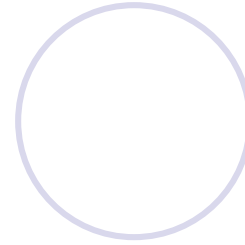
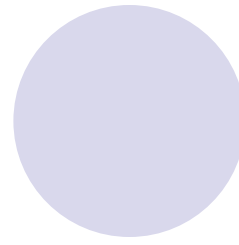
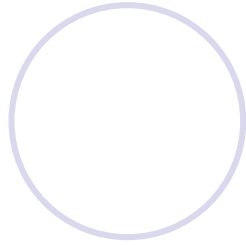
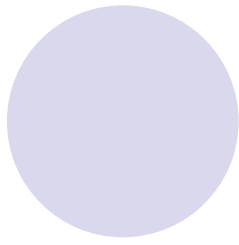
GULF OF GUINEA

## Introduction

- Around 90% of these deaths occur in Africa, mostly in young children
- Almost all of Ghana is considered holo-endemic although
- GIS technology is currently available and needs to be applied to malaria

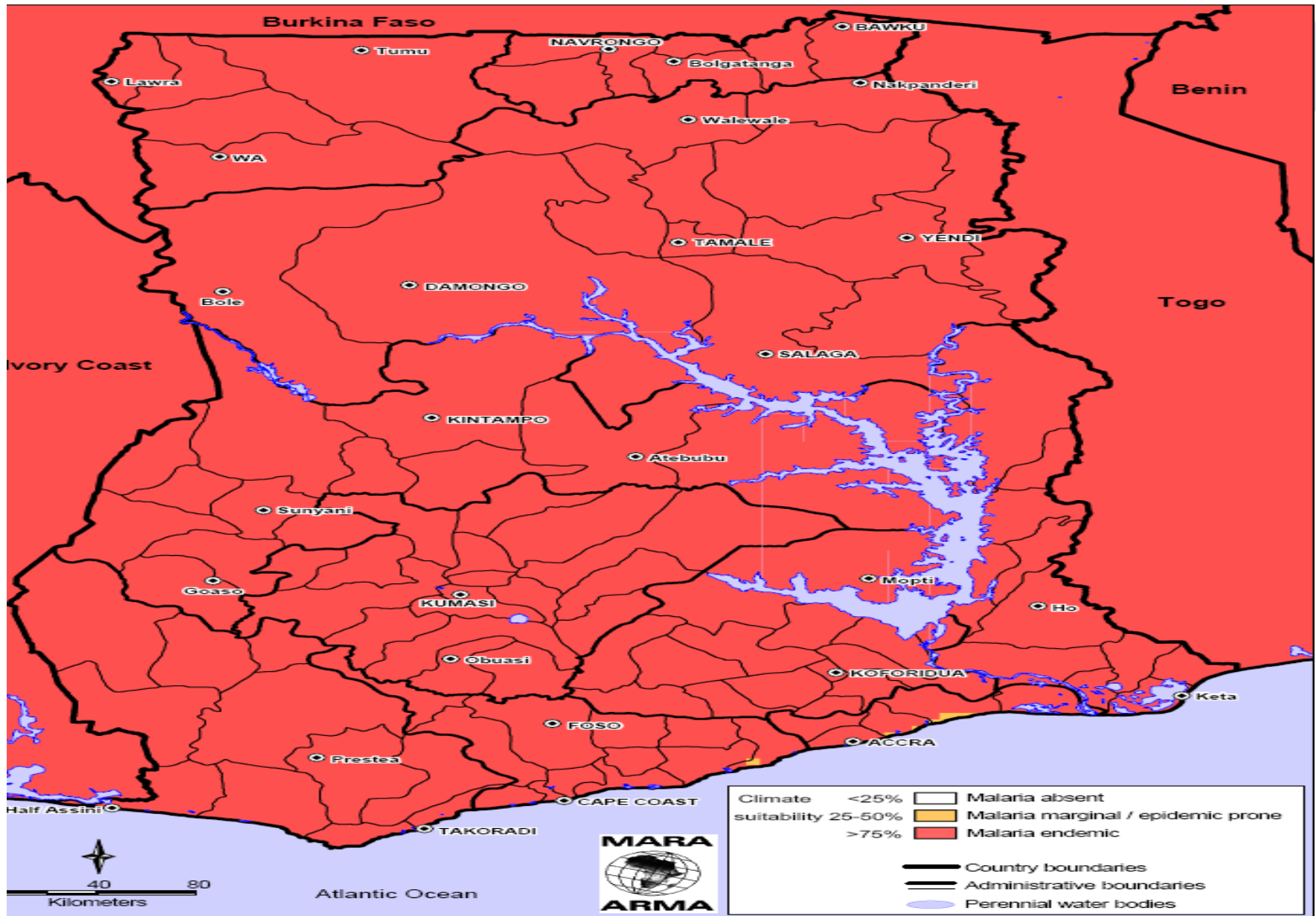
## Objective

- To profile malaria parasite positive cases of malaria in the pediatric population and to ascertain if there are any differences in the Mampong savannah/deciduous forest compared with Axim tropical rainforest and differences in terms of ethnic groups



- The hypothesis this study makes is that because Axim has a tropical rainforest vegetation compared to Mampong which has a mixed semi deciduous forest and Guinea Savannah woodlands that the malaria clinical presentation profiles would be different. Therefore, it is expected that there would be difference in the degrees of anemia and parasitemia in the two different populations.

# Ghana: Distribution of Endemic Malaria

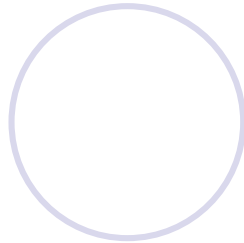
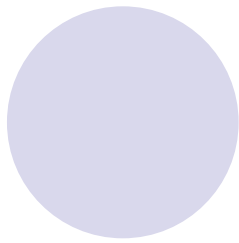


<http://www.rollbackmalaria.org/countryaction/maps/ghana.jpg>

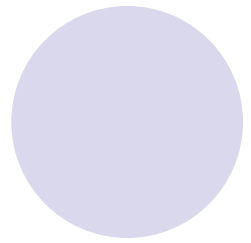
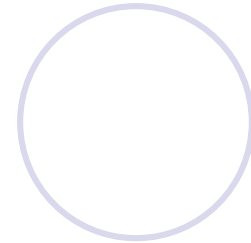
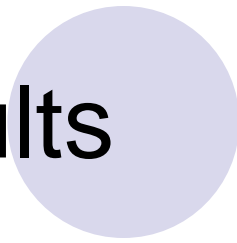


# Methodology

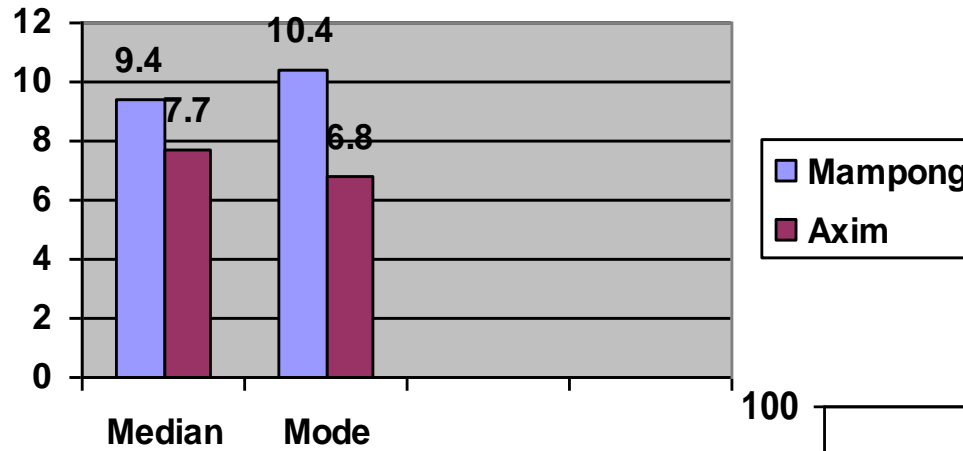
- In Mampong, 46 malaria parasite positive thick blood film results obtained between January and April of 2009 were identified and among those the data for their age, white blood cell count, hemoglobin, and treatment were compiled
- In Axim, data on age, hemoglobin and white blood cell count were available for all 36 Malaria parasite positive thick blood film cases



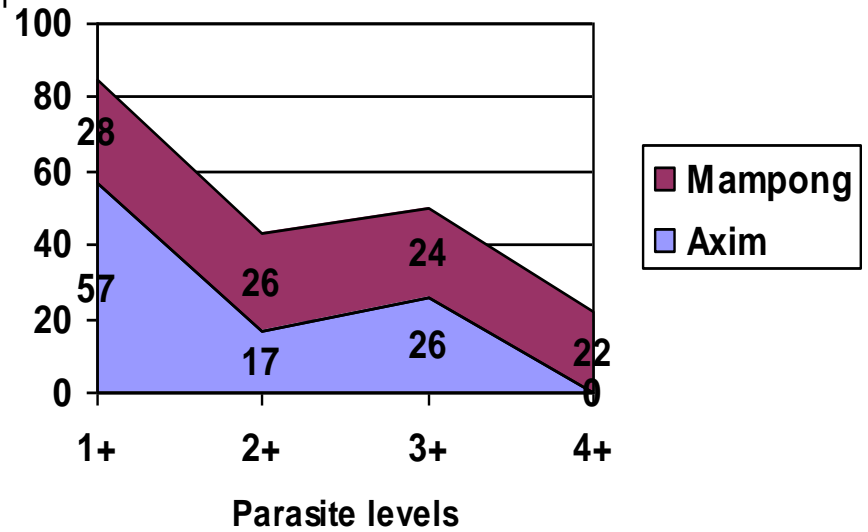
# Results



### Hemoglobin Levels



### Parasite Levels





# Conclusion



- Majority of cases were in children ages 5 and under in both Axim and Mampong with majority of cases among children ages 2 and younger
- Anemia tend to be more severe in Axim than Mampong
- Parasitemia tend to be more severe in Mampong than Axim
- Nutrition and health insurance status could be important confounders.

# Acknowledgements



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- Axim Hospital laboratory staff