

**malaria**  
**NO MORE**

# MALARIA: A NEW MODEL FOR DISEASE ERADICATION

ISDS Conference  
January 31, 2019



# “MALARIA IS THE WORST THING ON THE PLANET.”

-BILL GATES

- Malaria is humanity’s oldest and deadliest disease, killing more people throughout history.
- Prior to Malaria No More’s launch twelve years ago, **1.2 million** people were dying from a mosquito bite every year.





**“MALARIA ERADICATION  
WOULD RANK AMONGST  
HUMANITY’S GREATEST  
ACHIEVEMENTS.”  
-THE ECONOMIST MAGAZINE**

**7 MILLION**

Lives saved since 2000

**1.3 BILLION**

Cases averted since 2000

**\$2 TRILLION**

Added to economies of malaria-  
affected countries



# INNOVATION TO **END** MALARIA



**DIAGNOSTICS & DATA**

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**HUMAN MOBILITY**

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**GENOMICS**

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# DIAGNOSTICS & DATA





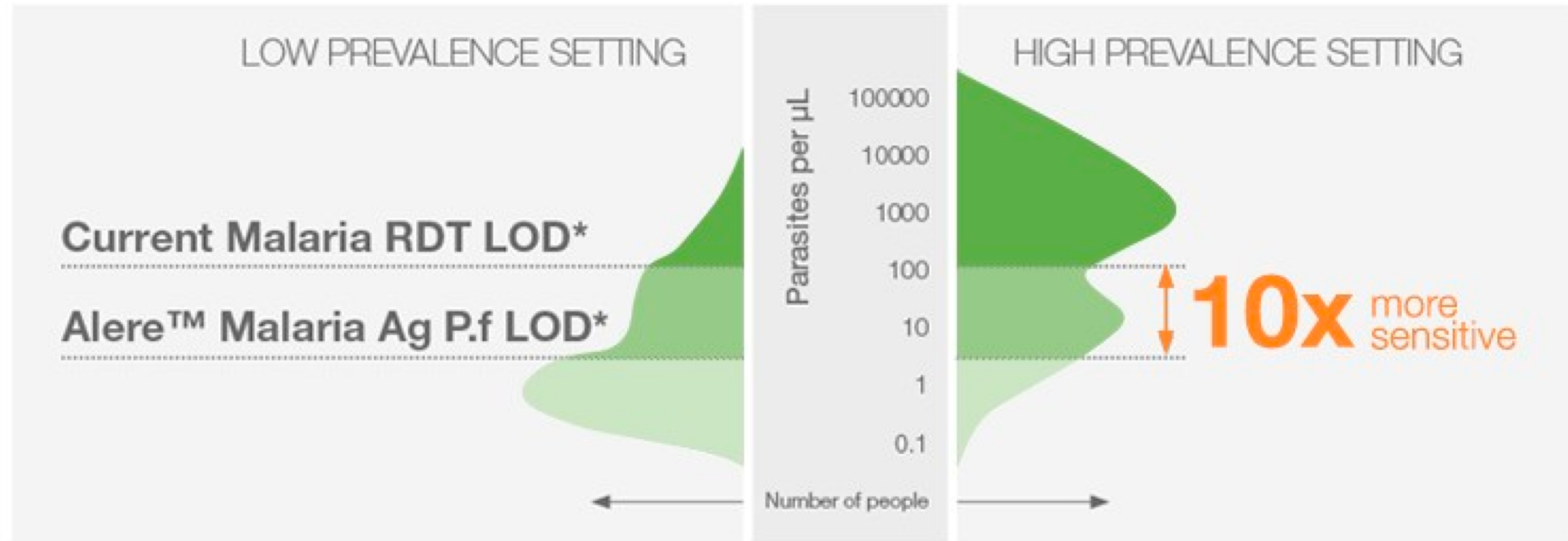








## Improved identification of individuals with low parasitemia in asymptomatic populations



\* Limit of detection

Adapted with permission from PATH, pending publication: Das, S. et al. Performance of a high-sensitivity rapid diagnostic test for *Plasmodium falciparum* malaria in asymptomatic individuals from Uganda and Myanmar and naïve human challenge infections







# HUMAN MOBILITY

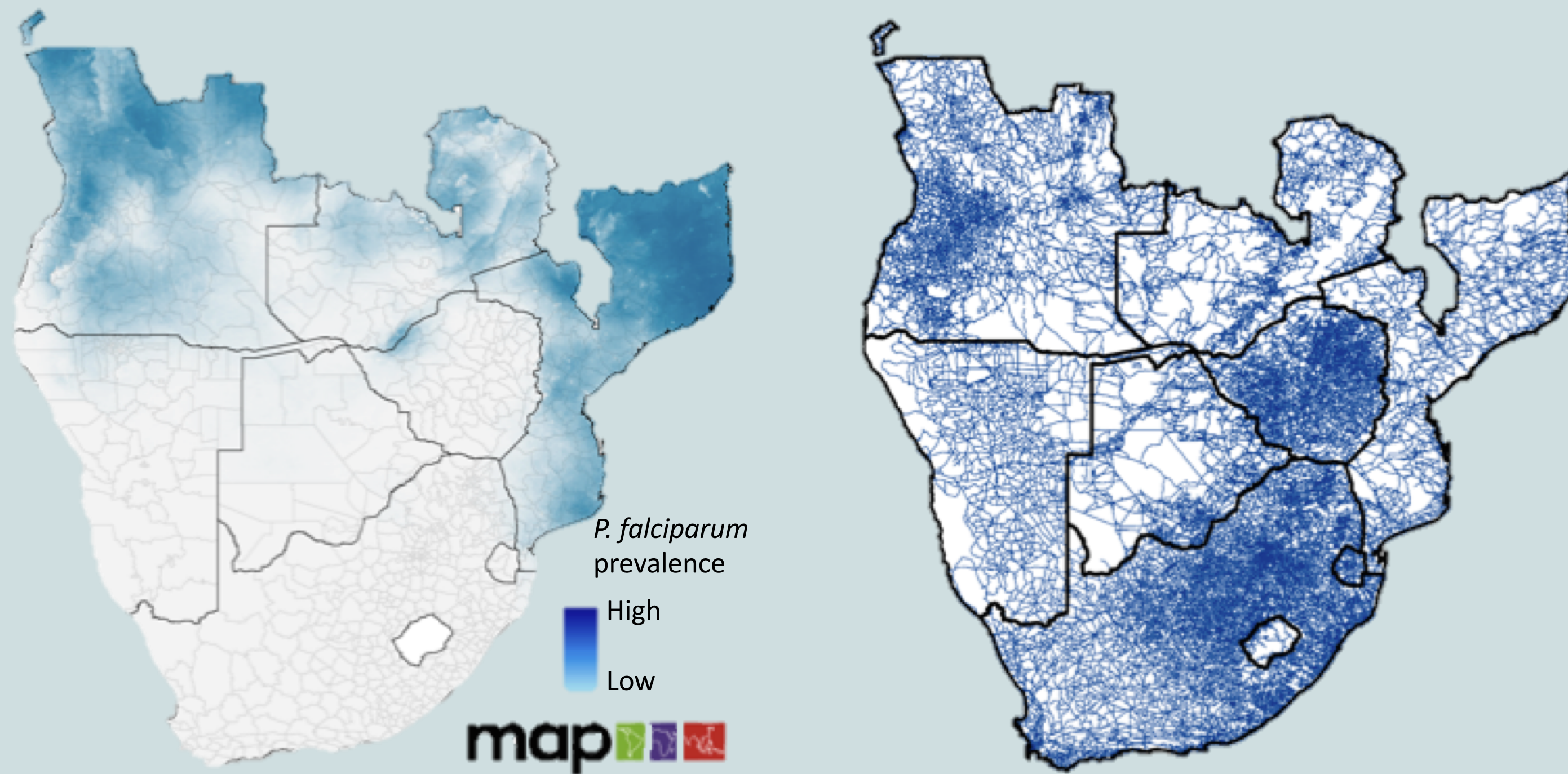




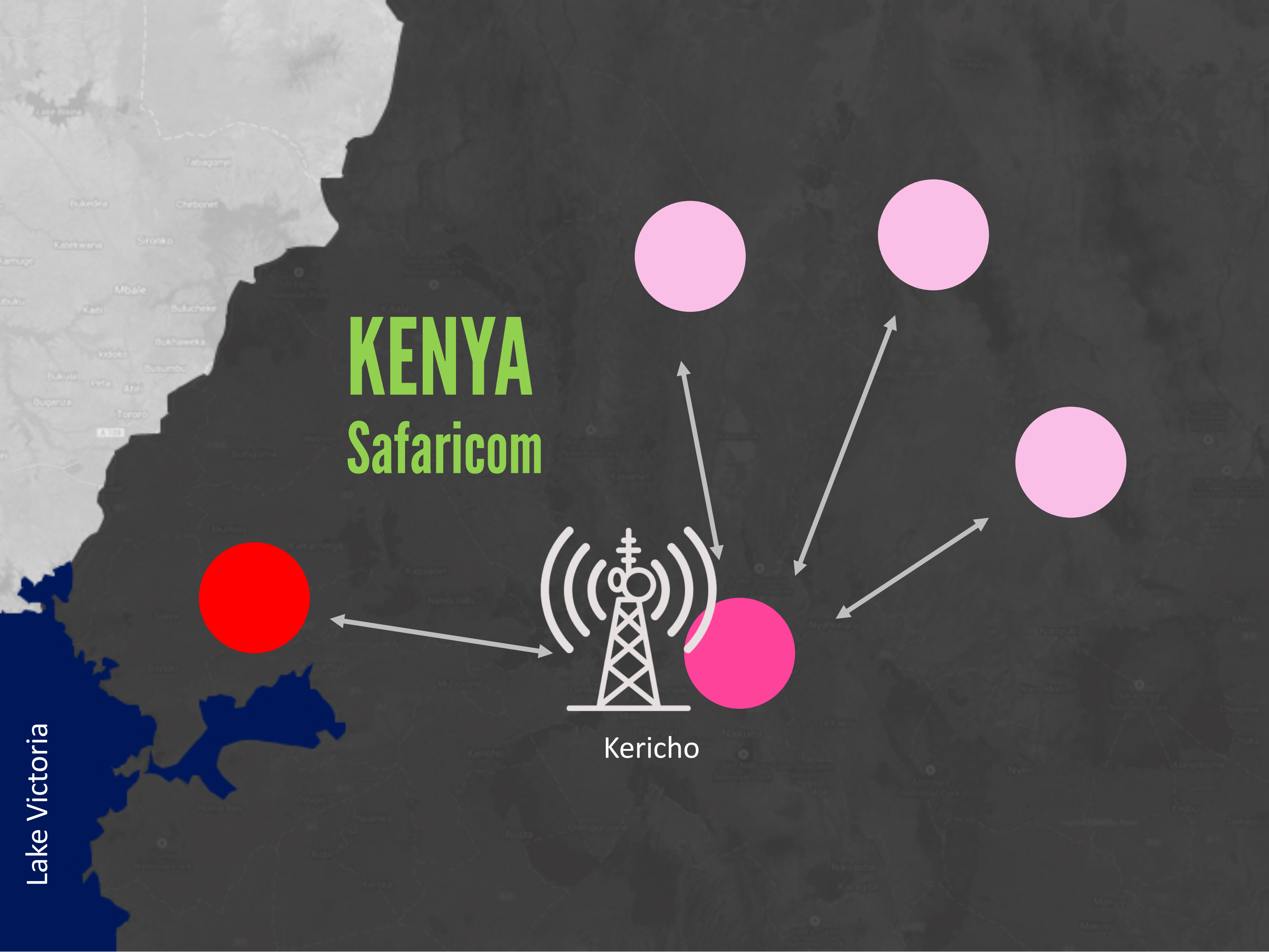
# Malaria and Mobility

We live in an increasingly connected world and malaria does not respect national borders.

Thinking spatially, accounting for connectivity and collaborating regionally can be valuable for planning surveillance and designing appropriate attack strategies.







**KENYA**  
**Safaricom**



Kericho

Lake Victoria





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Google earth

Imagery Date: 9/10/2011 0°22'13.65" S 35°16'39.97" E elev 6491 ft eye alt 11640 ft





Kericho, Kenya Kericho

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Google earth

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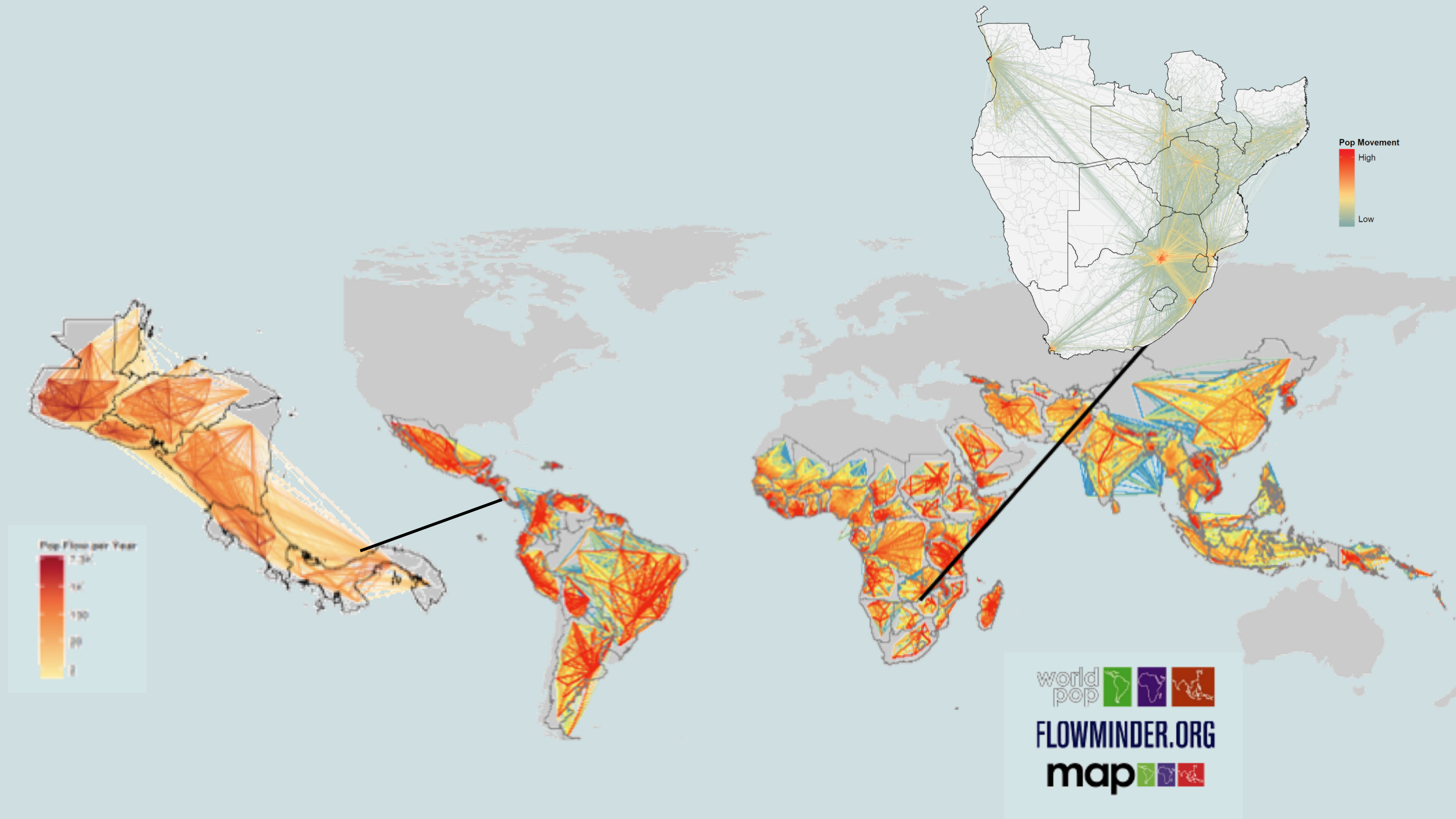






# Mapping Global Connectivity

Traditional (e.g. census migration) and novel (e.g. mobile phones) datasets can help us measure human mobility and model how it connects the malaria endemic regions of the world.





# Mapping Parasite Mobility

Integrating malaria maps with human movement data helps us understand the landscape of malaria parasite connectivity.

