

# Climate Information for Public Health Action

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Health and Climate Colloquium

IRI

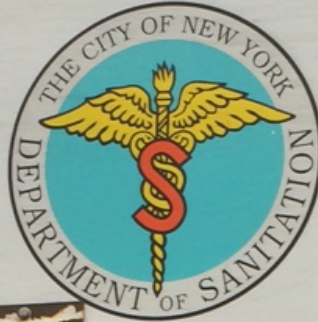
PAHO/WHO Collaborating Centre on early warning  
systems for malaria and other climate sensitive diseases



# sanitation

**SAFETY  
SERVICE  
SUSTAINABILITY™**


## 20BD-018





## Bx.EA

**THE ZIKA VIRUS**  
**FIGHT BACK**  
**NYC**

**WE CAN PREVENT THE SPREAD OF ZIKA  
AND OTHER MOSQUITO-BORNE VIRUSES**



 REMOVE STANDING WATER SO MOSQUITOES CAN'T BREED  
 CALL 311 TO REPORT STANDING WATER

Visit [nyc.gov/health/zika](http://nyc.gov/health/zika) for more information. **NYC**

**KEEP  
NEW YORK CITY  
CLEAN  
DON'T  
LITTER**



AN SHAFTS DAILY

T.P.120



NO STEEP

# Blackfly



# Filarial Worm



Eye disease

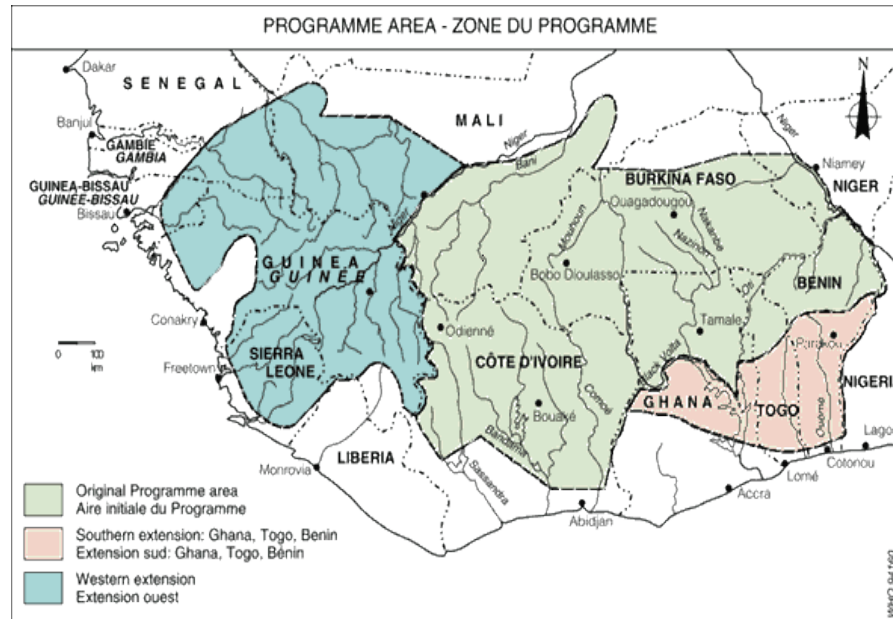


Skin disease

# Blackfly



*The UN Onchocerciasis Control Programme (OCP), launched in 1974, has been one of the most successful disease management programmes in Africa.*



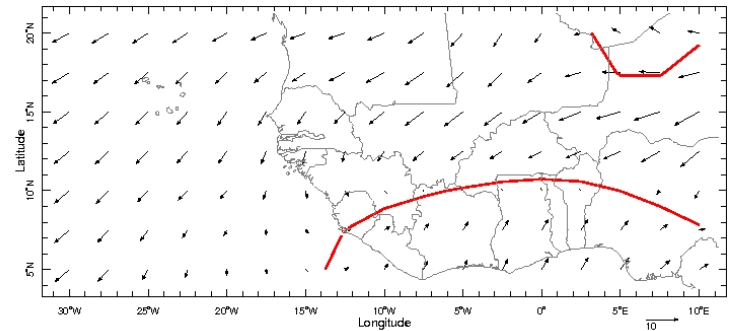
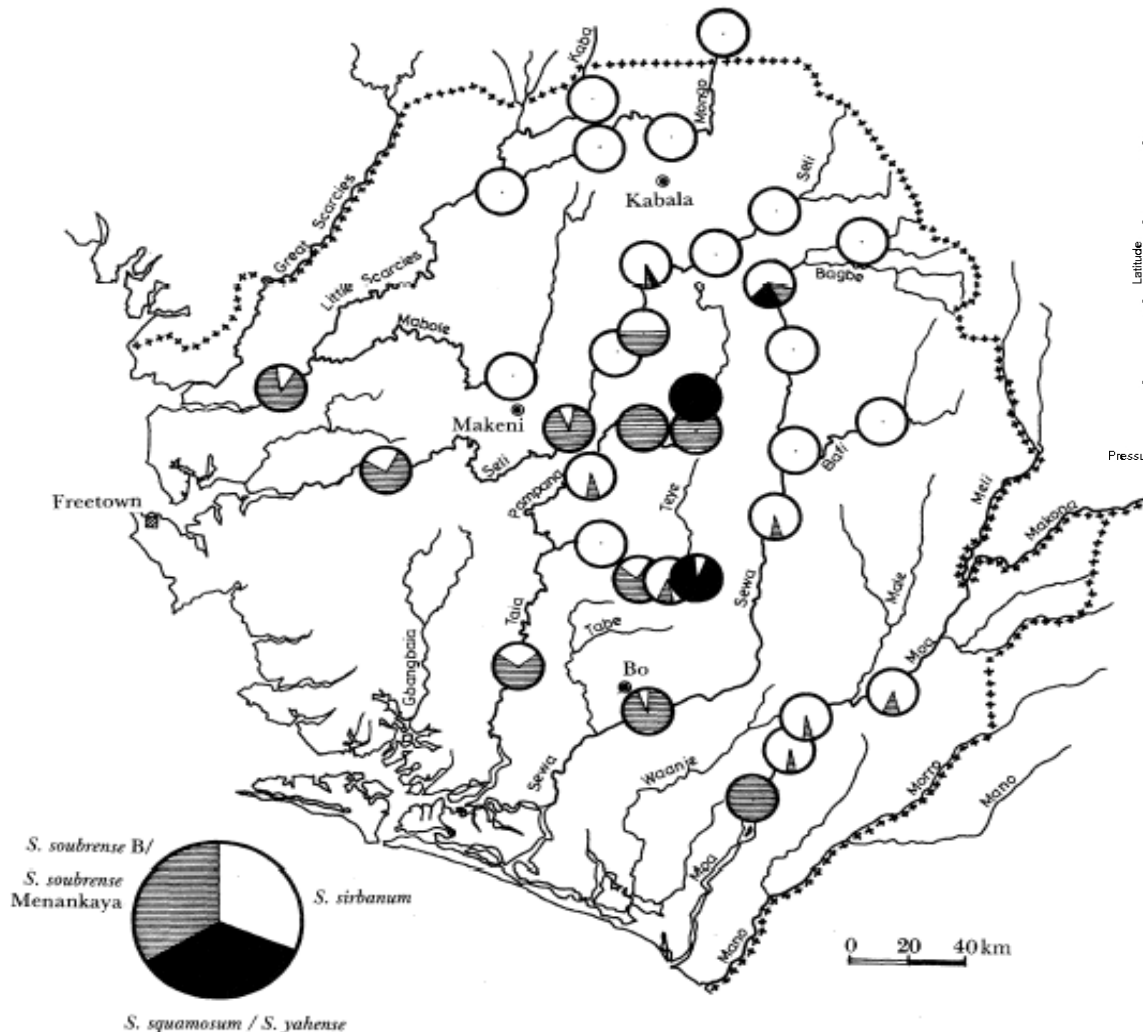
Eye disease

# Filarial Worm



Skin disease

# What caused the unusual occurrence (April-May 1988) of savannah flies (vectors of river blindness) in forested Sierra Leone?



**Thomson, M.C.,** Davies, J.B., Post, R., Bockarie, M.J., Beech-Garwood, P.A., and Kandeh, J.E. (1996) The unusual occurrence of savanna members of the *Simulium damnosum* species complex in Southern Sierra Leone in 1988. *Bulletin of Entomological Research*. **86**, 271-280

FIGURE 6. The distribution of different members of the *Simulium damnosum* species complex in Sierra Leone in April-May 1988, identified by larval cytotoxonomy.

Climate is both a challenge and a  
resource

There are many drivers of health outcome – what makes climate unique?

Its structured characteristics make it ideal for integration with health surveillance data.

# Climate characteristics and drivers

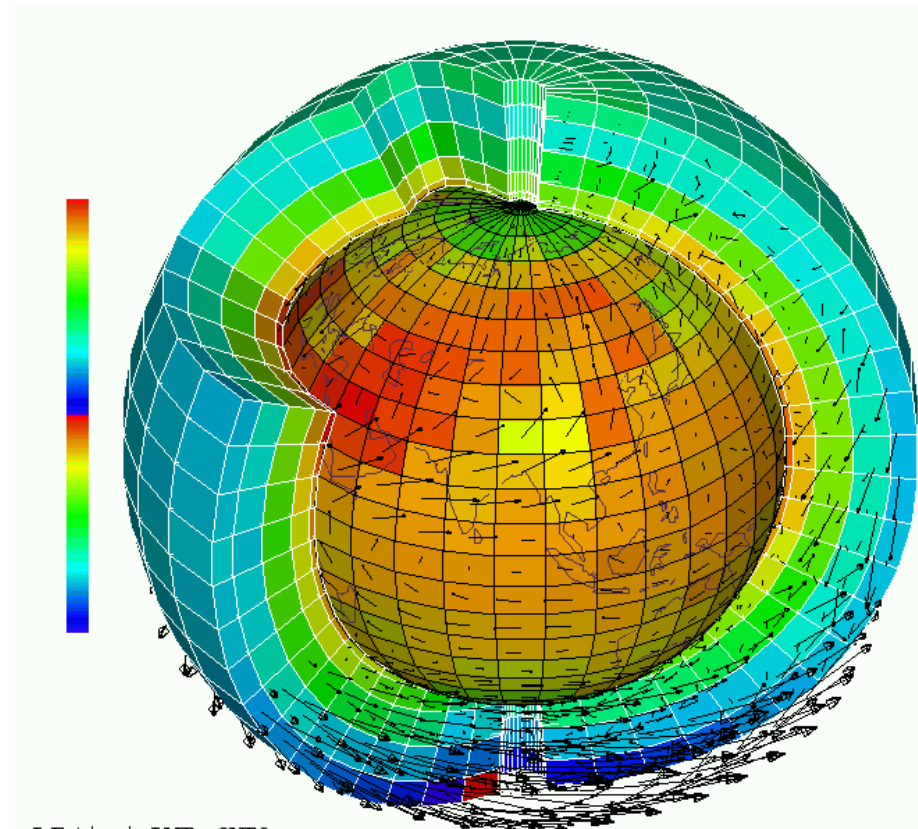
- **Seasonal cycle** – movement of the Earth around the sun
- **Year to year variability** - Short term cyclical changes in sea surface temperature
- **Decadal variability** – long term cyclical changes in sea surface temperature
- **Climate change** – anthropogenic forcing



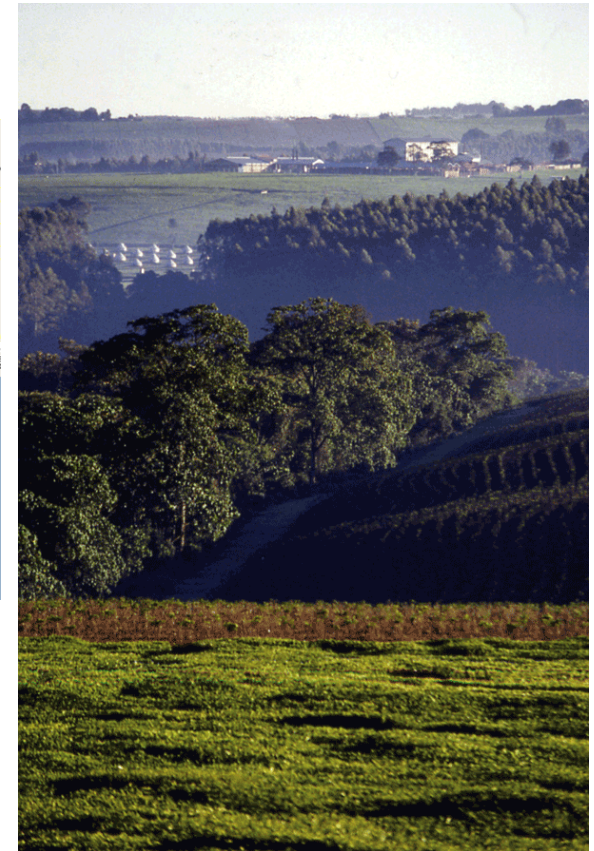
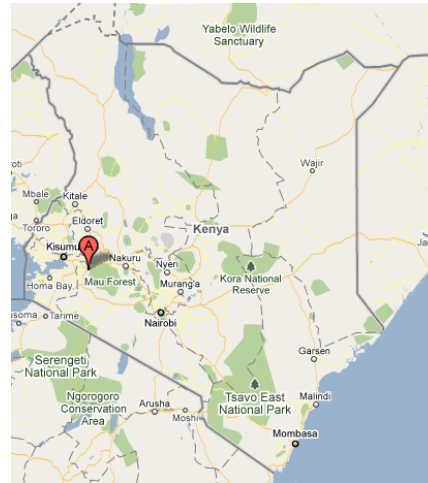
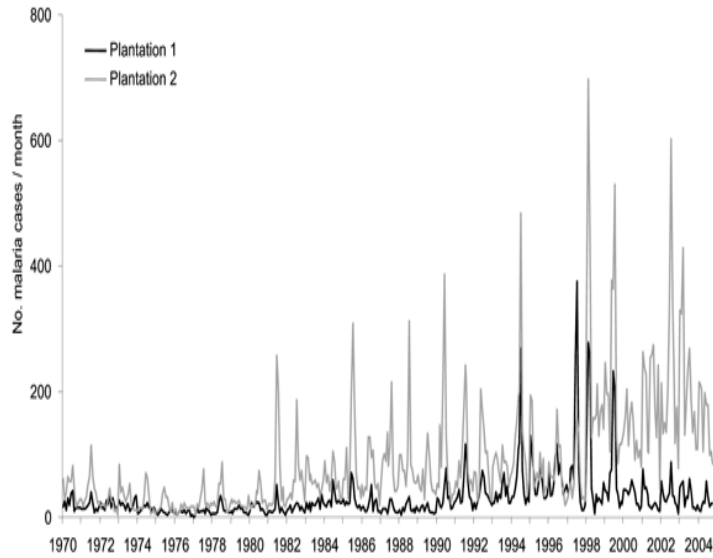
Also - it is measured routinely all around the world by the meteorological/ climate community



# Since the 1980s



# Kericho debate



Monthly malaria cases at Kericho Unilever Tea Kenya Ltd Hospital.

Hay et al., (2002).

# Four requirements in getting evidence into policy and practice:

- agreement as to the nature of evidence
- strategic approach to the creation of evidence, together with the development of a cumulative knowledge base
- effective dissemination of knowledge; together with development of effective means of access to knowledge
- initiatives to increase the uptake of evidence in both policy and practice

# How can climate information improve health outcomes?

- improve understanding of the **mechanisms** of climate's impact on transmission and disease
- estimate populations at risk (**risk mapping**)
- estimate **seasonality** of disease and timing of interventions
- monitor and predict **year-to-year** variations in incidence (including early warning systems)
- monitor and predict **longer term trends** (climate change assessments)
- improve assessment of the **impact of interventions** (by removing climate as a confounder)

# How this meeting is organized

Day 1

**Policy context**

**Data**

\*Launch WMO Case study book

Day 2

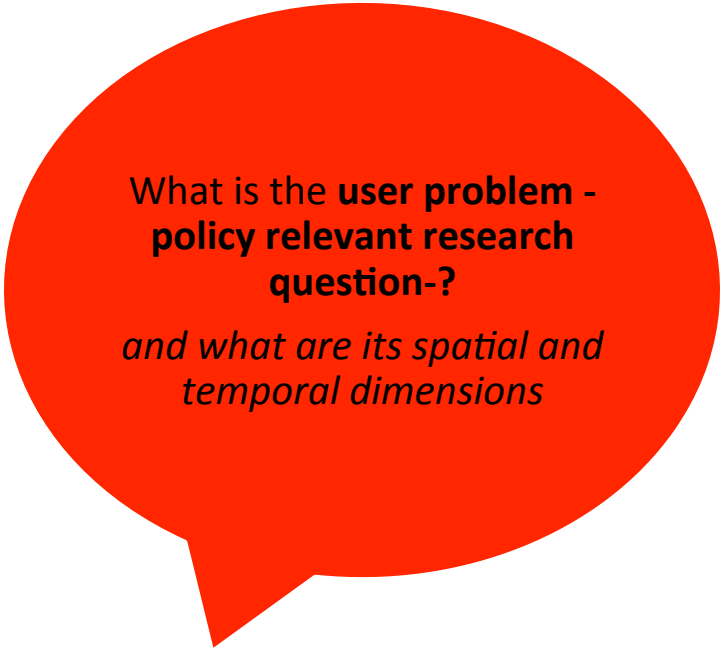
**Methodologies**

**Tools**

Day 3

**Education and training**

**Prioritization of investment areas**



What is the **user problem -  
policy relevant research  
question-?**

*and what are its spatial and  
temporal dimensions*

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Data Choice

Data Collection

Data Integration  
and Analysis

Data Interpretation  
( information)

Impact on policy  
and practice

Information  
Dissemination



# What do we expect as an outcome for this meeting?

- Initiate/strengthen network of community of practice
- Identify key resources and capabilities that need to be built/strengthened
- Identify opportunities for action at scale including education and training
- Build institutional partnerships for the long haul
- Motivate and inspire the young professionals and researchers to build their careers in this space
- Capture the knowledge in this room and transform it into a resource for the global public health community

# Thank you!

# IRI

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