



# Rabies control: Building a business case

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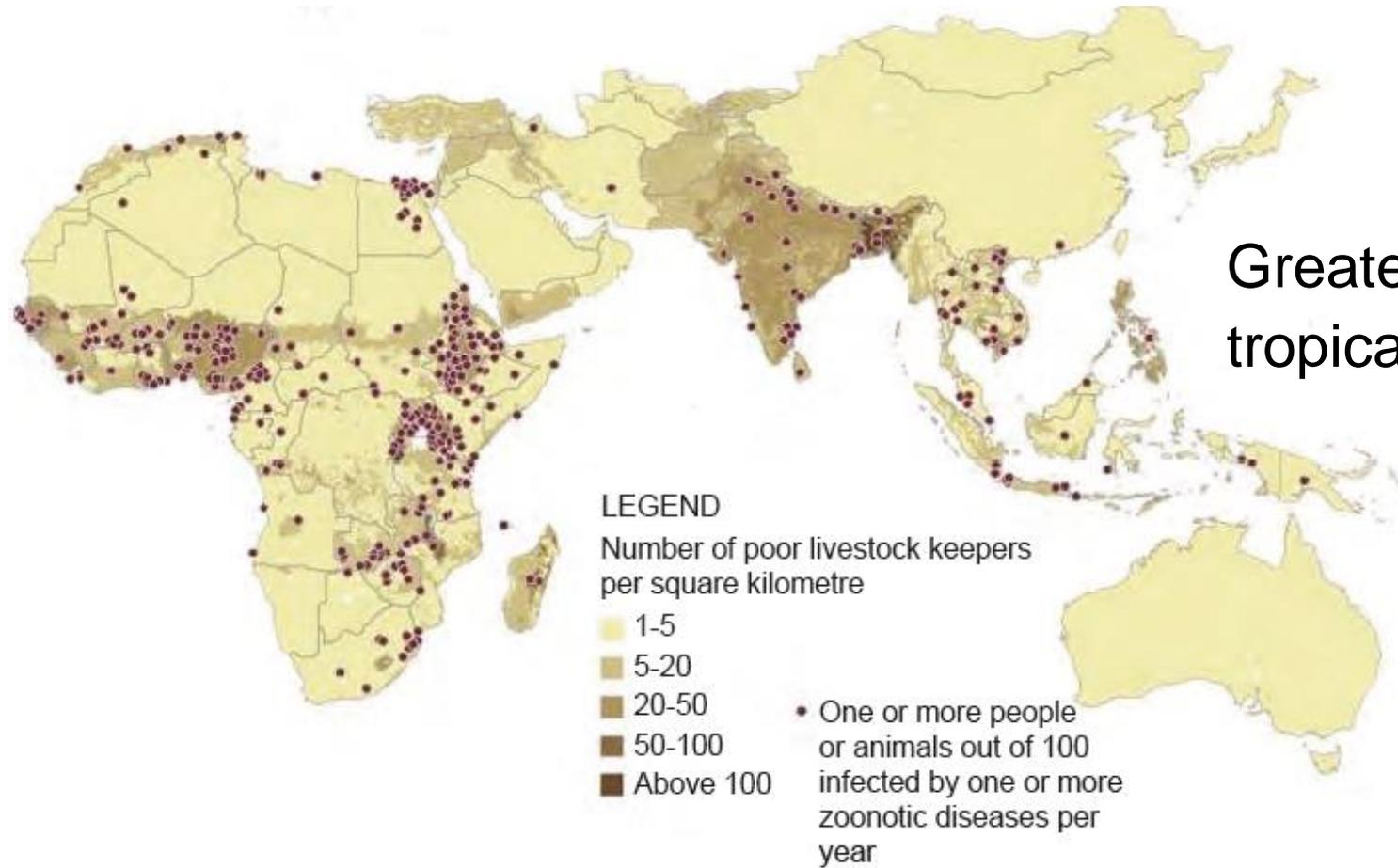
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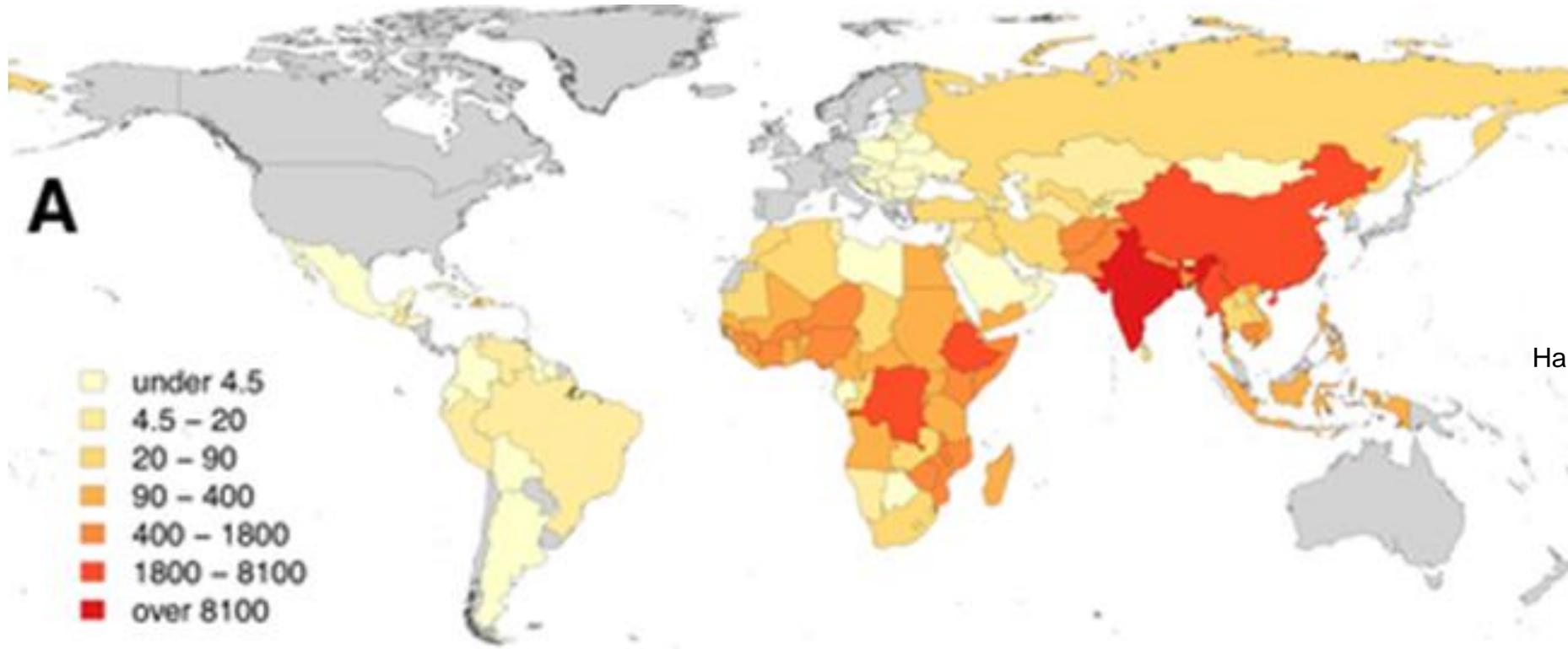


# Global societal challenge of infectious diseases

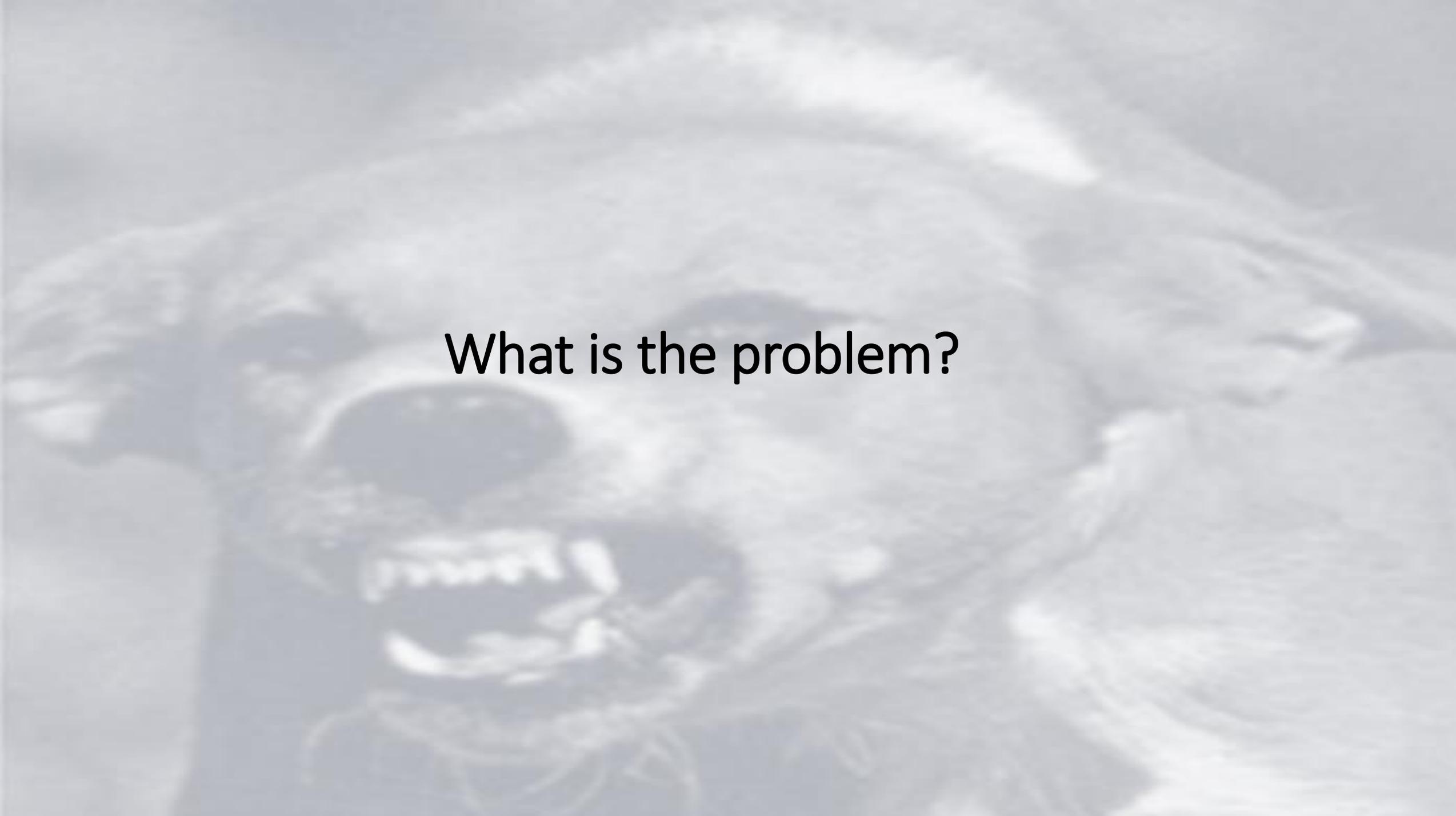


Greatest burden concentrated on poor tropical communities

# Global burden of dog-transmitted rabies and distribution of human rabies deaths

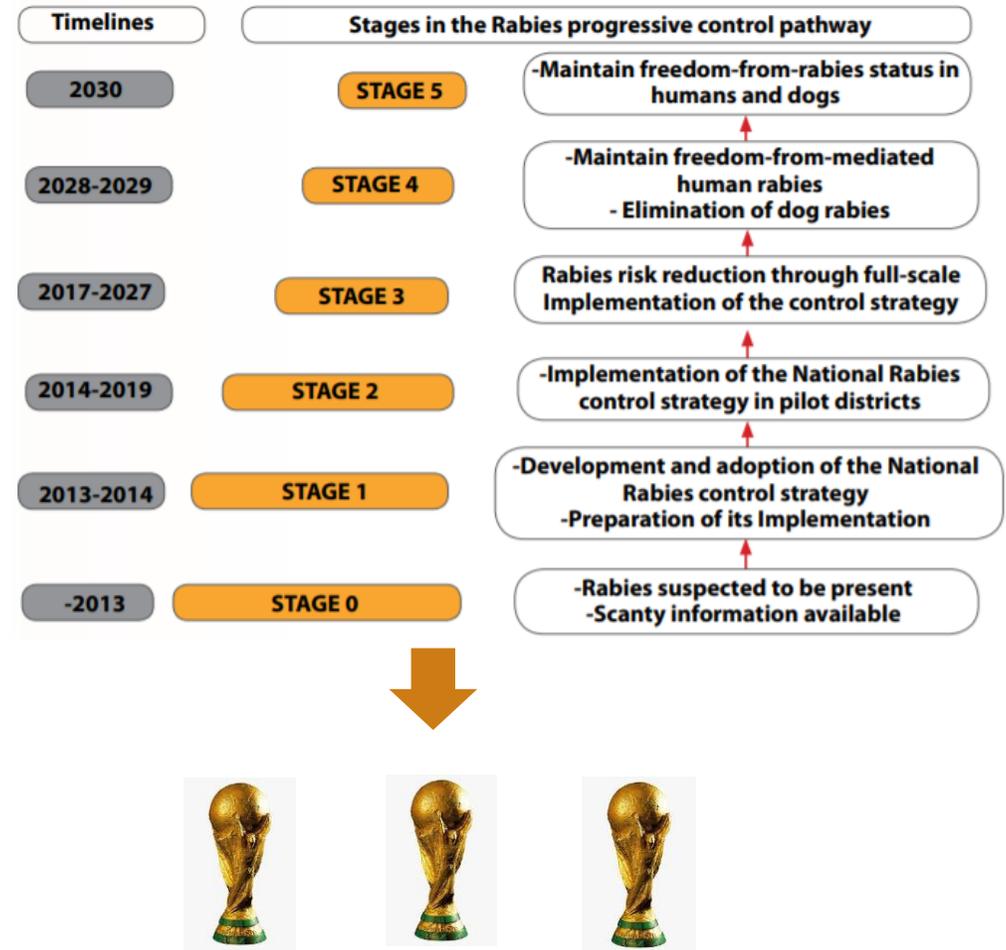


Hampson K, et al. PLoS Negl Trop Dis 2015



What is the problem?

# Working to eliminate human deaths from dog rabies by 2030

Business case – how much, at what cost

# Machakos Rabies project

## Implementors



## Collaborators



## Funder





Proposal?



**Quantify dog bites and rabies burden**



**Mass dog vaccination**



**Cost effectiveness**



**Cost vaccination**



**One health**



**Vaccination coverage**



**Innovative financing**

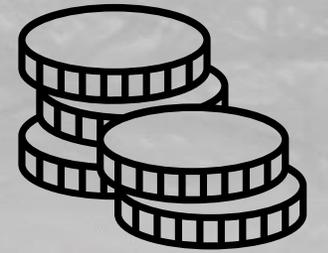


**Dog ecology**

- Population estimate
- Demographic structure
- Population dynamics

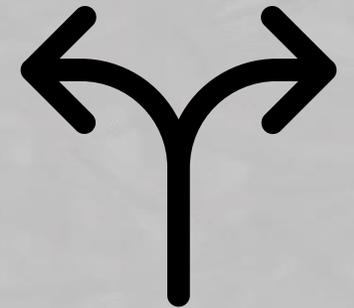
# One Health economics

- Decision making
- Use of scarce resources
- Opportunity cost
- Utility = welfare enhancement, happiness, nutrition, status
- Search for optimality



- Assumption that humans are 'rational utility maximisers'

- Data is necessary to show policy makers why certain interventions are necessary



# Direct cost associated with disease

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Vaccination coverage



Population control

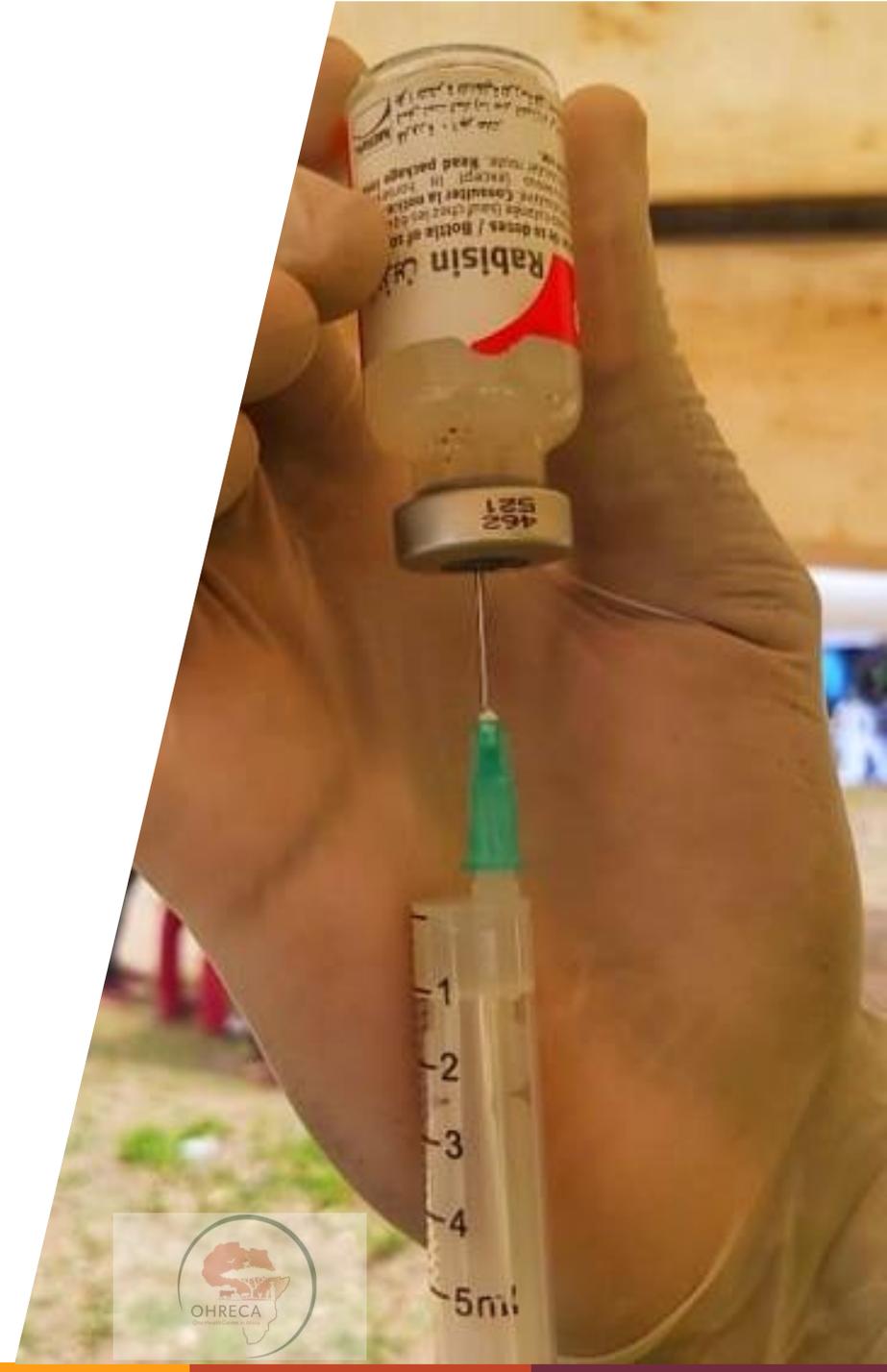


Surveillance



Livestock losses

Vaccines, regimes, Immunoglobulins



# Human Health Metrics



## Monetary

- Cost of illness
- Statistical value of life

## Non-monetary

- Mortality rate
- Years of the life lost
- Health-adjusted life years (Disability Adjusted Life Years & Quality Adjusted Life years)

# Final thoughts

- Standardized & robust surveillance
- Robust and coherent intervention – vaccination
- More economic data to match epidemiological data
- More studies to gather momentum and uptake by decision makers!





Thank you



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