



# The African Field Epidemiology Network (AFENET)

**Innovations for One Health Capacity Building and Operationalization: AFENET's Experience**

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**The 1<sup>st</sup> One Health Congress, Melbourne, Australia,  
Feb 14- 16<sup>th</sup>, 2011**

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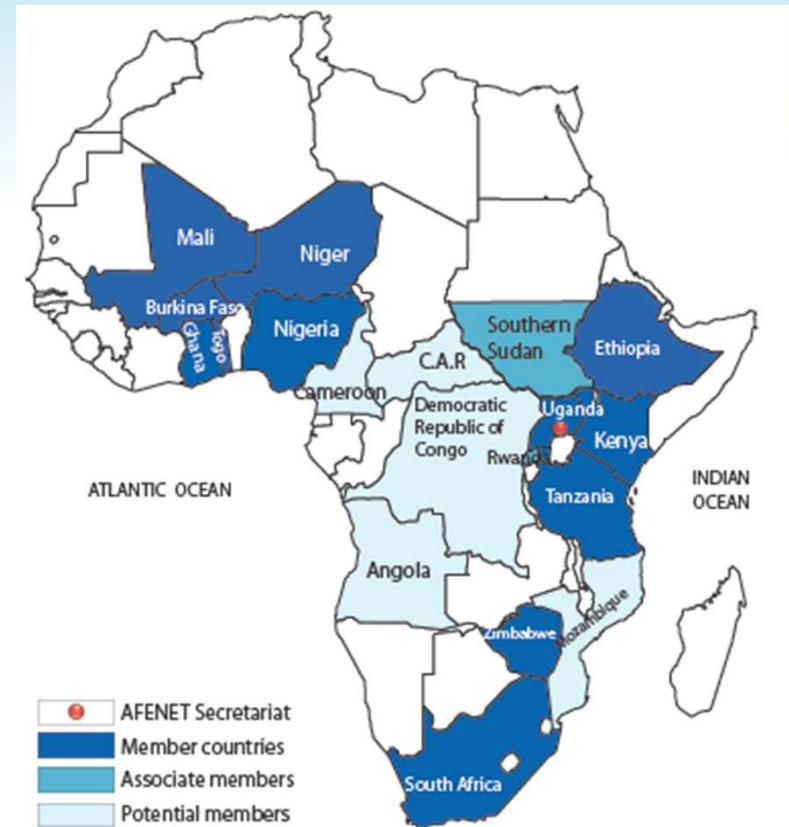
# Outline of Presentation

- About AFENET
- Background
- One Health Capacity Strengthening Activities
- Opportunities



# About AFENET

- A non-profit organization and networking alliance dedicated to helping Ministries of Health in Africa build strong, effective and sustainable programs and capacity to improve public health systems
- Established in 2005
- A network of Field Epidemiology and Laboratory Training programs (FE(L)TPs) across Africa
- **Member programs**  
Ethiopia, Ghana, Kenya, Nigeria, South Africa, Tanzania, Uganda, French West Africa, Rwanda, and Zimbabwe FE(L)TPs
- **1 associate members**  
South Sudan



# Why AFENET exists

**A healthier Africa**  
A F E N E T

**African Field Epidemiology Network**

Training Material  
Useful Links  
Photo Gallery

**Projects**  
AIZIP  
UITP  
Other project  
More [+]

**Latest News**  
2nd - 30th November 2009  
19th - 30th October 2009  
28th September- 9th October 2009  
14th - 25th September 2009  
More [+]

**Publications**  
The Zoonotic Diseases table (Uganda-2008)  
The Zoonotic Diseases Table (Ghana-May, 2009)  
Fund Managers and Internal Audit Advert  
Monthly Newsletters [+]

**Pan African Medical Journal**

Ghana  
Kenya  
Nigeria  
South Africa  
Southern Sudan  
Tanzania  
More [+]

**About AFENET**  
Welcome to the African Field Epidemiology Network (AFENET). The mission of AFENET is to improve the health of people in Africa by strengthening and expanding applied epidemiology and laboratory capacity on the African continent. Established in 2005 as a non-profit organization, AFENET is working in partnership with Ministries of Health, non-government organizations, international agencies, private sector, and other public health agencies to help African nations enhance or develop their own applied epidemiology capacity. The AFENET secretariat is located in Kampala, Uganda. More [+]

**Weekly Updates**  
2nd - 30th November 2009  
19th - 30th October 2009  
28th September- 9th October 2009  
More [+]

**Opportunities at AFENET**  
IHR Implementation Course  
Receptionist Job Description  
Program Assistant Job Description  
Scope of Work (Fund Managers and Internal Audit)  
More [+]

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- **Vision**  
A healthier Africa
- **Mission**  
AFENET is committed to ensuring effective prevention and control of epidemics and other priority public health problems in Africa
- **Goal**  
To strengthen field epidemiology and public health laboratory capacity and, effectively contribute to addressing epidemics and other major public health problems in Africa.



# AFENET's Approach

- **AFENET is organized around a networking and service concept**
  - Utilizes cooperation with other agencies MOH, Universities, NGOs, the private sector and an extensive network of professionals to detect and respond to disease outbreaks
- **Strategic Priorities**
  1. Field Epidemiology Capacity Development
  2. Public Health Laboratory Capacity Development
  3. Public Health Disease Surveillance and Effective Response
  4. Networking and Collaboration
  5. AFENET's Institutional Development
  6. Information and publications

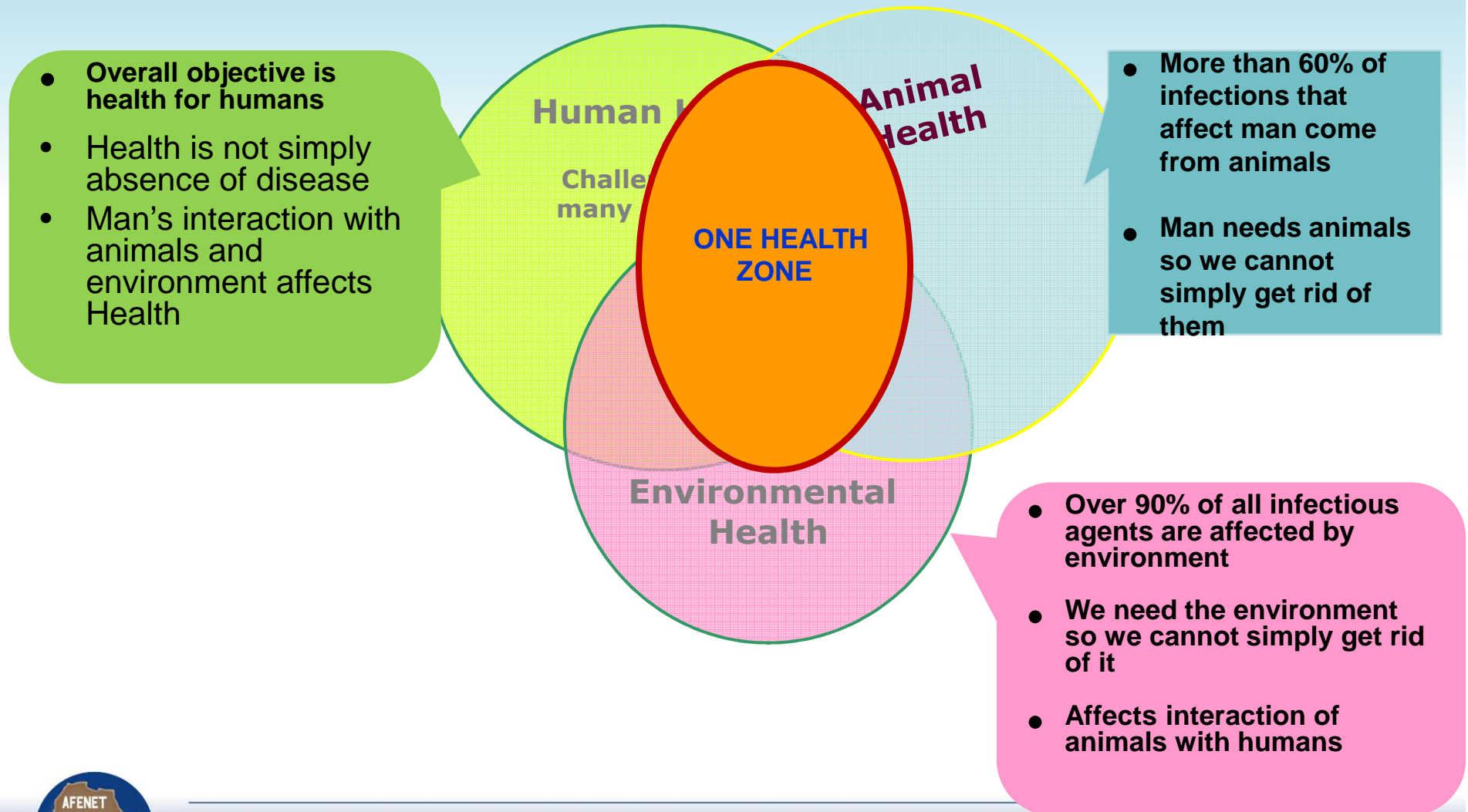


# Background- One Health

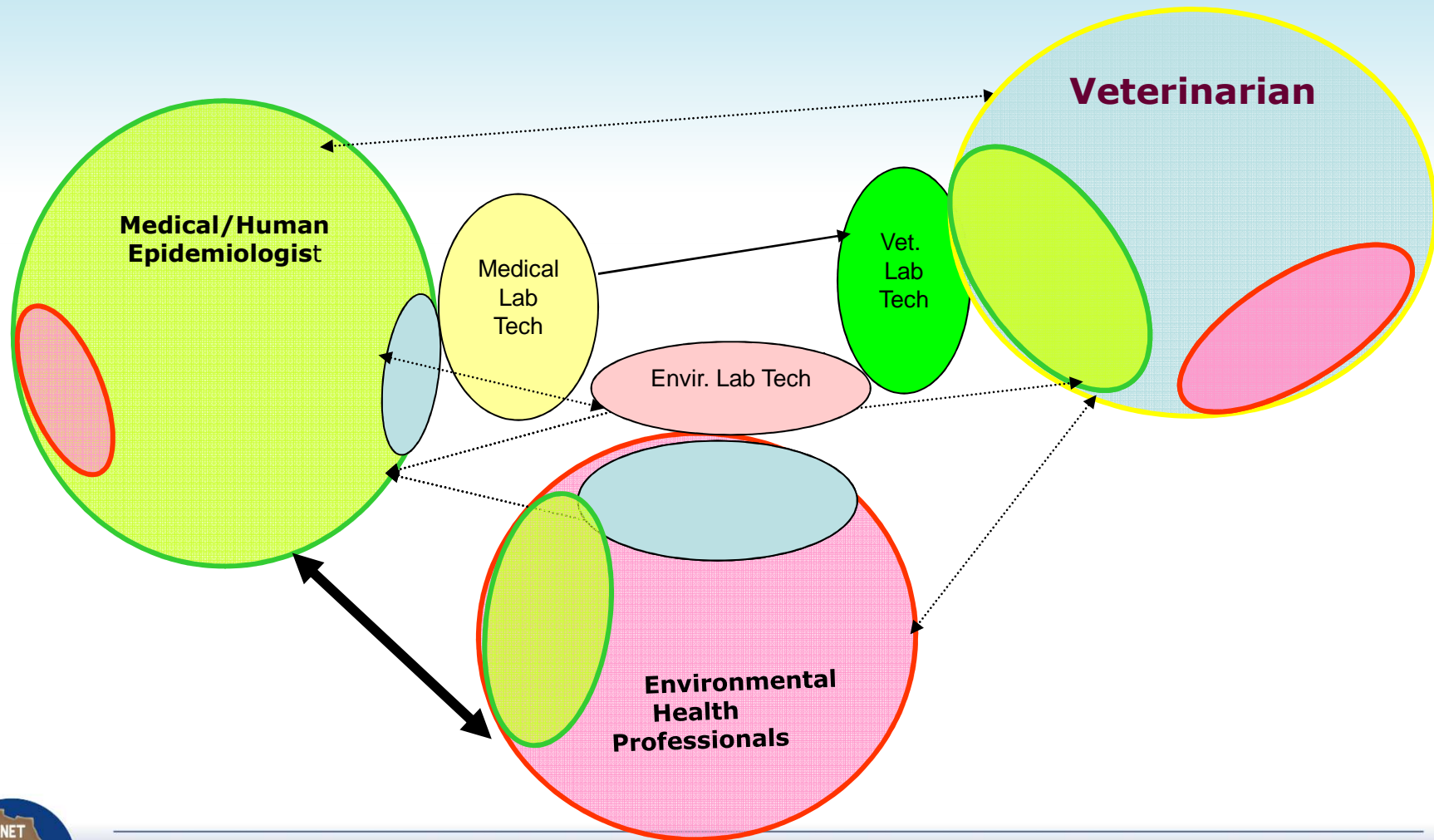
- One Health Concept has been well articulated
- In principle embraced by all major public health players globally, but;
- Considerable challenges still face its implementation
  - Need for a paradigm shift at sectoral, disciplinary and professional levels
  - Changes in strategies, attitudes and resource allocation.
  - Need for capacity building to enhance multi-sectoral and multidisciplinary communication, collaboration,
  - Standardized tools and basic skills to be developed



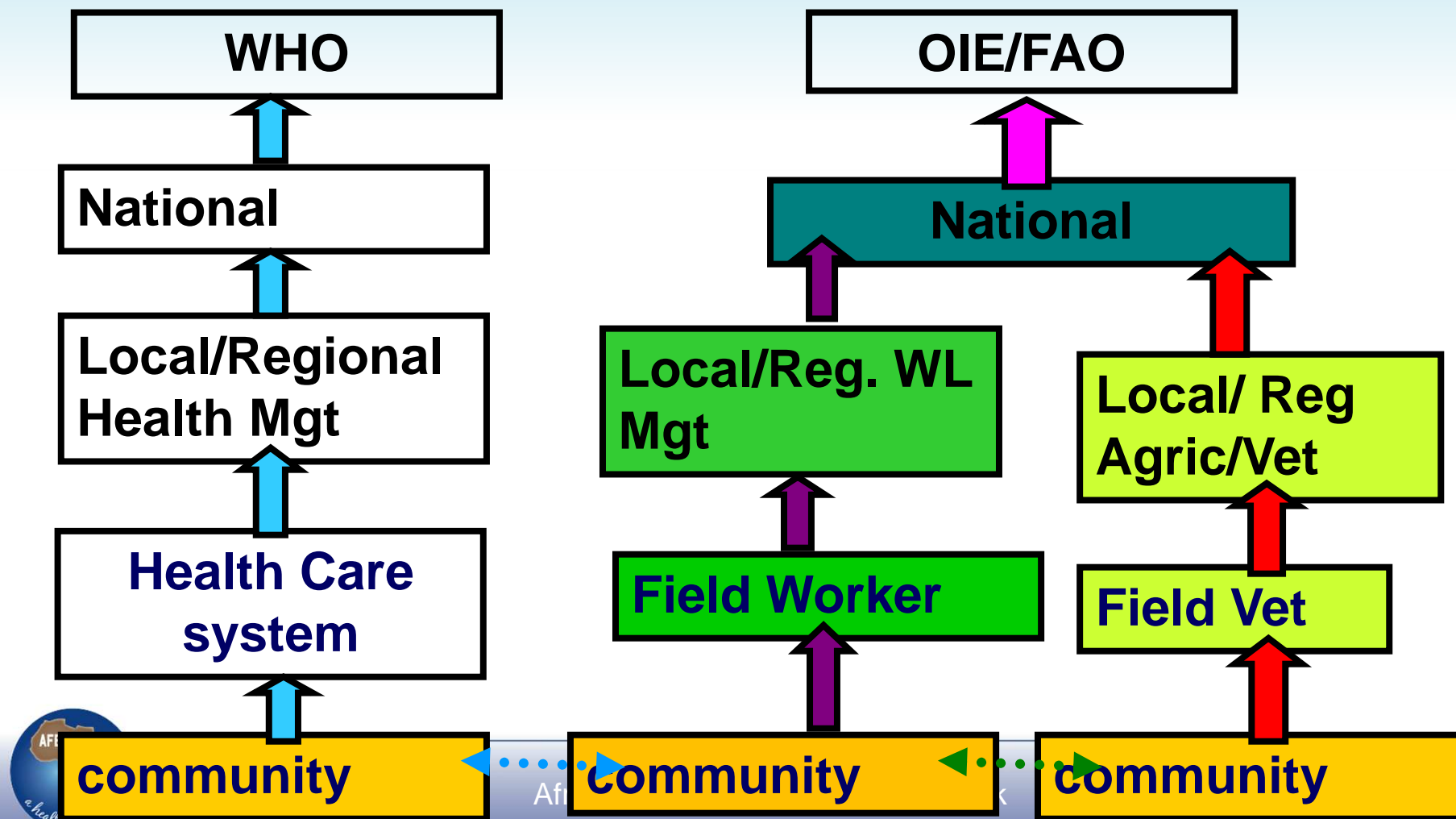
# The One Health Zone



# Current Training of key Professionals

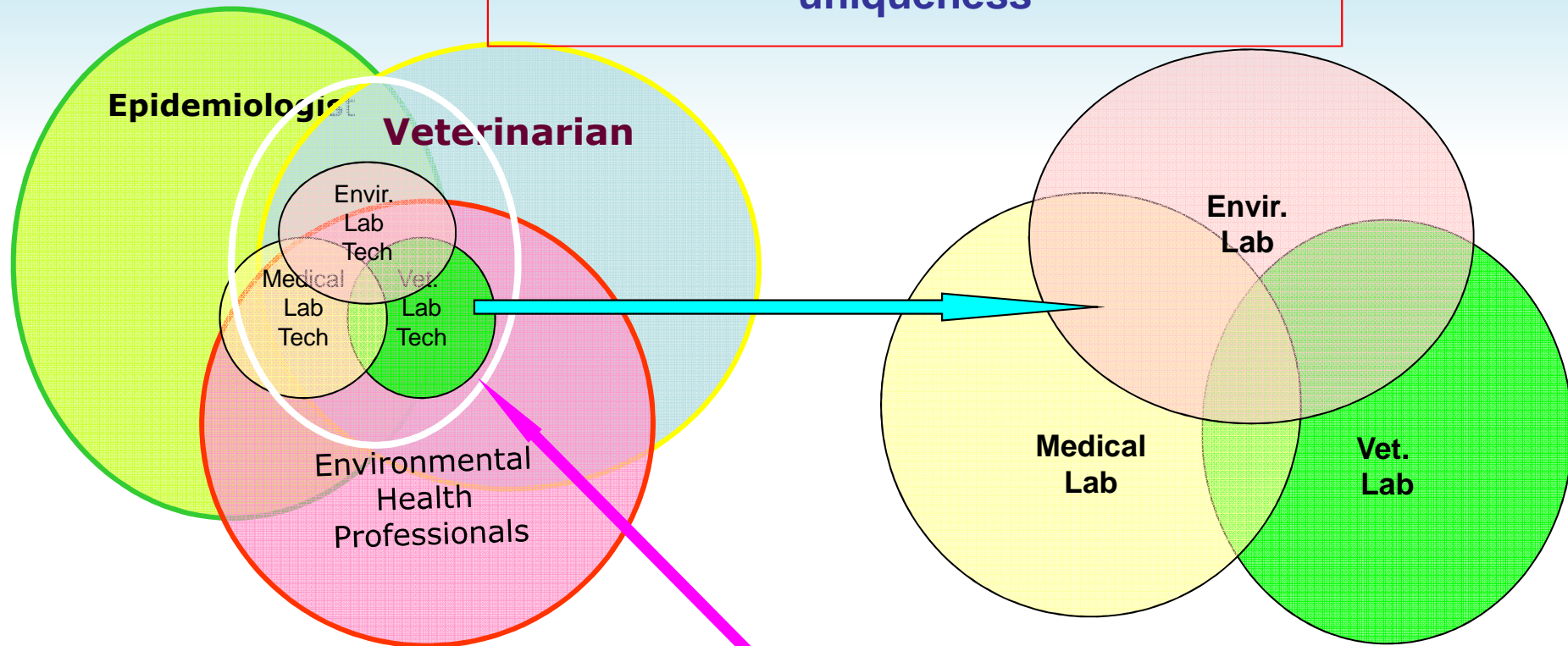


## Information Flow in surveillance Systems



# Model For One Health Zone Training

Professional / Technical / system uniqueness



**Goal: Create common platform –understanding, common skills, networking, team work**



# AFENET's One Health capacity building activities

1. Training
2. Disease interventions
3. Systems strengthening
4. Advocacy



# Training

- **Multiple Track in FETPS**
  - Kenya, Tanzania, South Africa, Nigeria, Rwanda – have 2 tracks
  - Nigeria has all 3 tracks
- **Basics Vet/Lab Field Epi in FETP curriculum**
- **Short courses for field staff**
  - Zoonotic diseases surveillance & management
  - Participatory Epidemiology
  - Leadership and Management
- **Post FELTP Fellowship**



# The Avian Influenza and other Zoonotic Infections project (AIZIP)

- Developed in collaboration with CDC
  - to strengthen national and regional capacity AI/PI Preparedness and Response
  - Funded by USAID – 2008 to 2010
- Philosophy was to develop capacity for influenza indirectly by
  - initiating sustainable systems that can easily be adapted for wider application to zoonoses
- Flagship project for AFENET's One Health activities



# Disease interventions

## Plague

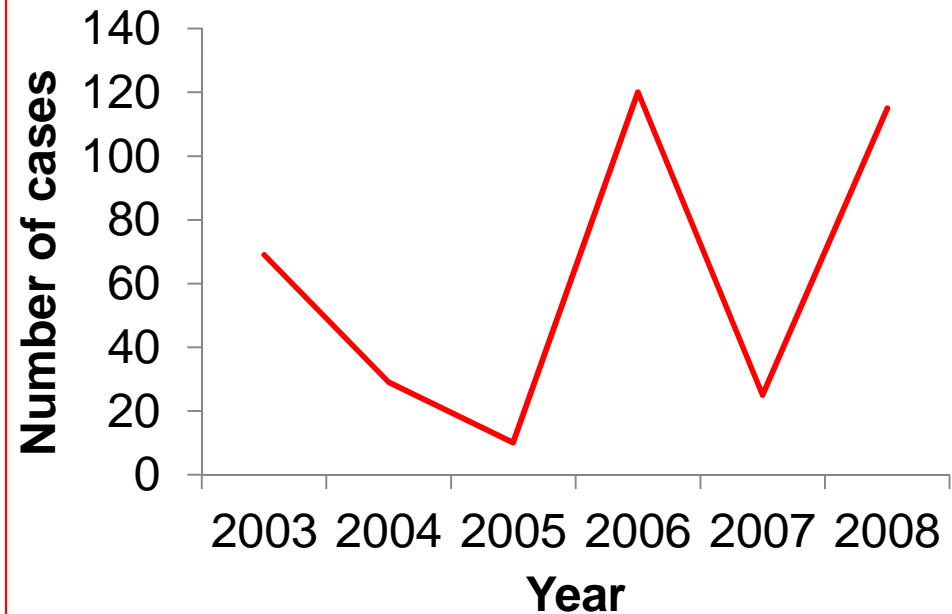
- A zoonotic disease
  - caused by a bacteria *Yersinia pestis*
  - circulating mainly among rodents and vector fleas
- Man is infected through
  - Flea bite,
  - Sometimes by direct contact/inhalation
  - Rarely by ingestion of infective materials
- Causes 3 syndromes
  - Bubonic, Septicemic, Pneumonic
- Endemic in West Nile region of Uganda, with repetitive annual outbreaks



# Typical Interventions

- Health sector (MOH and district)
  - Surveillance (passive and active)
  - Diagnosis & treatment of cases
  - Health education
    - Smearing houses with mud & cow dung
    - Clearing bushes 15 M around homesteads
    - Store of food outside human dwellings

**Trend of Plague cases 2003-2008 in Arua District**



# 2008- AIZIP One Health Approach

- Engaged multisectoral team
- Conducted detailed investigations
- Focus on preventing future outbreaks

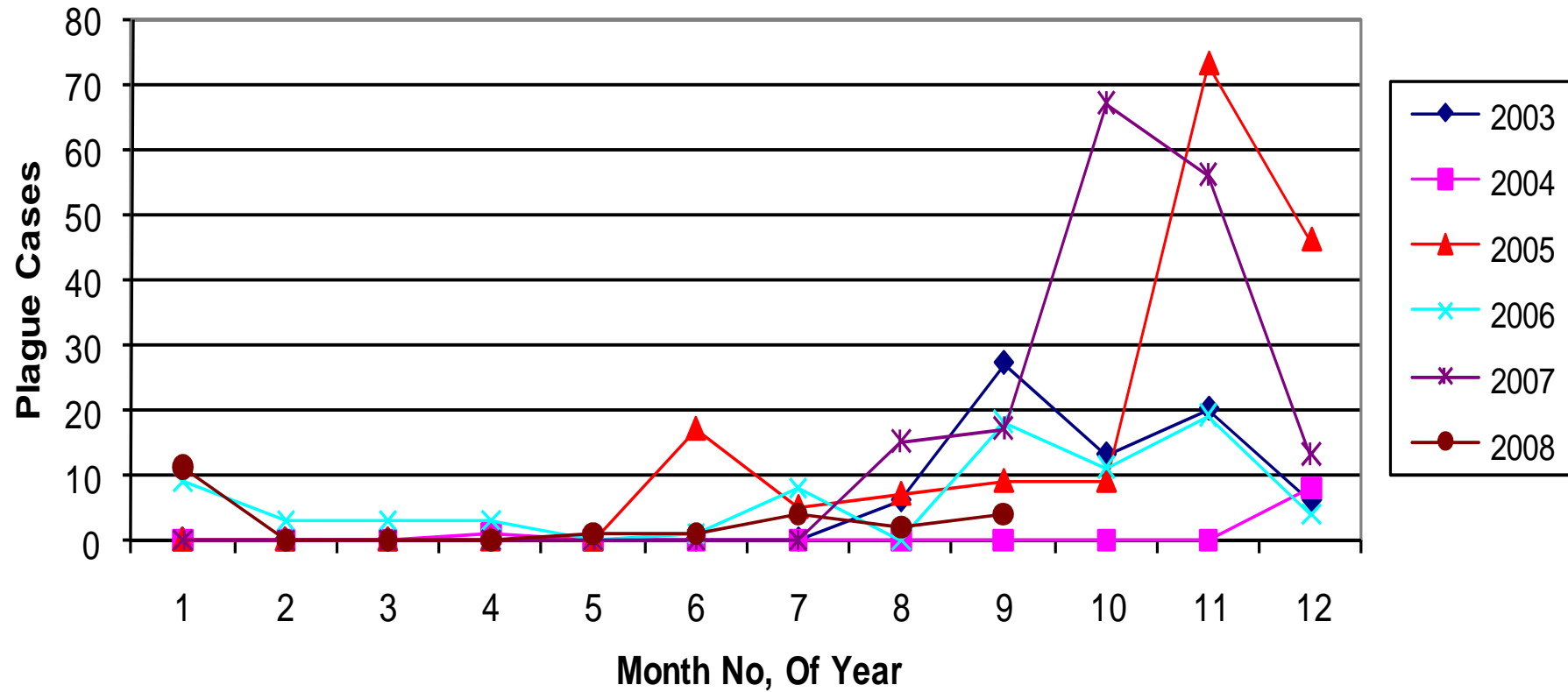


# AIZIP Team -2008



- Zoologist (MUK)
- Entomologist (Kyambogo) University
- Wild Life Vet (UWA)
- Sociologist (MUK)
- Vet Epi (MAAIF)
- Field EPI (AFENET)
- Biometrician (MOH)
- Clinician (MOH/District)
- Engineer/Architect (MUK)
- Microbiologist (MUK)
- Vet lab (MAAIF)
- Medical lab (District)

## Annual Trend of Plague Cases in Arua, 2003-2008



# Findings

- Annual epidemics for 6 consecutive years
- Outbreaks mainly occurred during July-November, peak in October
- Geographically localized
- Prevailing interventions not preventive
- Need to rethink ways of:
  - Interrupting disease transmission,
  - Reducing number of cases
  - Reducing morbidity & mortality



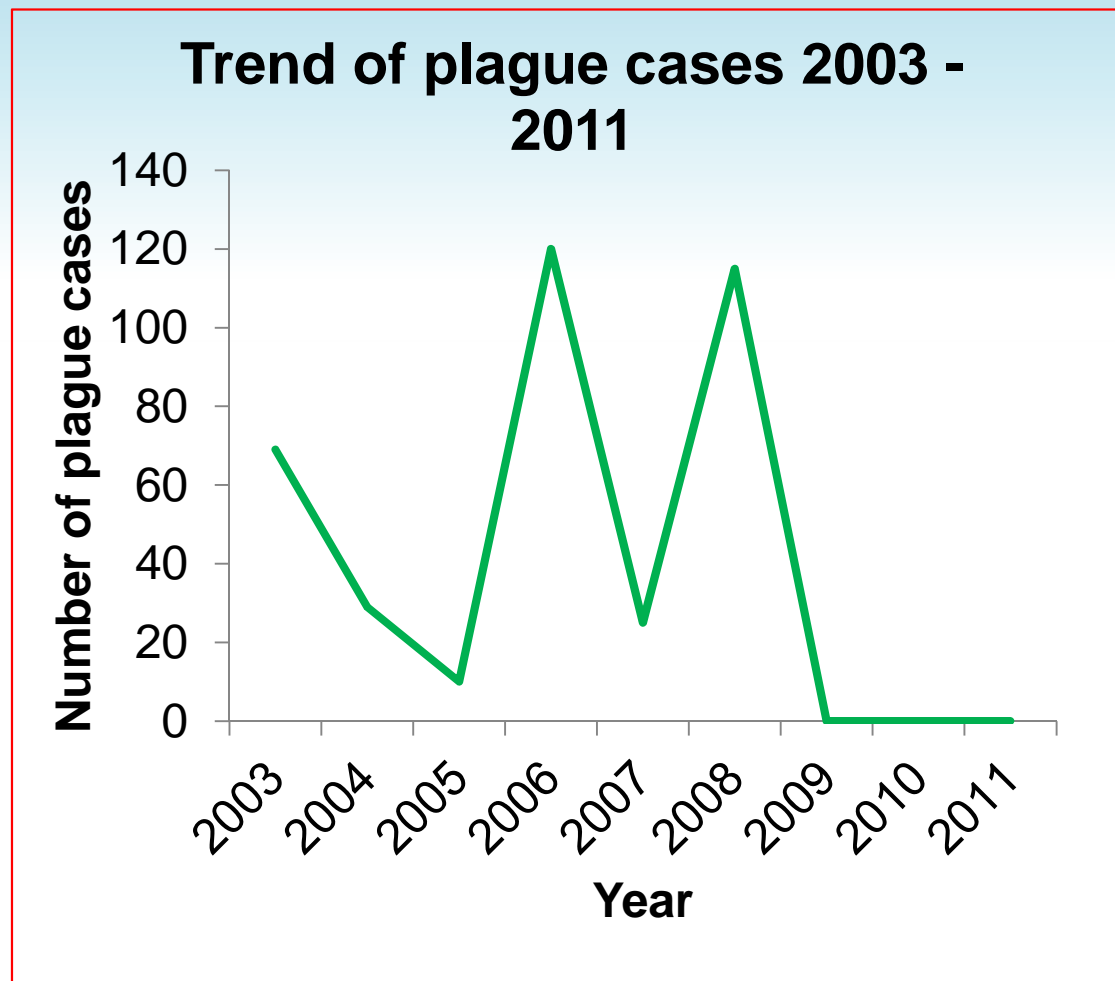
# New interventions

- **Primary interventions**
  - Indoor Residual Spraying – in collaboration with Malaria programs
  - Community Education – relevant messages
- **Secondary Interventions**
  - De-worming domestic animals with ivermectin – Ministry of Agriculture
  - Continued surveillance – CDC and MOH
  - Developing model rat proof hut and food storage bins - Makerere
- **Associated research**



# Outcome of new interventions

- No cases since 2009
- Preliminary data shows drastic concurrent drop in malaria cases
- Annual cost approx USD 18,000 per
- Pop at risk approx. 1,000,000



# System strengthening

## The Zoonoses Technical Working Group – Kenya

- Held AIZIP stakeholders meeting in 2008
  - Key stakeholders formed a multi-sectoral / multidisciplinary Zoonoses Technical working Group (ZTWG)
  - Meet quarterly to share information, including surveillance and research findings, outbreak threats
- Transformed into a **Zoonotic Diseases Unit**,
  - manned by staff seconded from both Ministry of Public Health and Ministry of Agriculture



# Advocacy and Networking

## Meetings and Conferences

- **Accra meeting – May 2009**
  - Brought together Ministries of Health, Ministries of Agriculture and the respective training institutions to discuss capacity building for zoonoses using One Health Approach
- **3<sup>rd</sup> AFENET Scientific Conference – August 2009**
  - **Theme was One Health**
  - Brought Ministry of Agriculture staff to participate for the first time



# Opportunities

- Institutionalizing for sustainability
  - Creating a home for One health office
- Getting more participation by human health professionals – Need to understand why they are not so enthusiastic about OH
- Standardizing what OWOH looks like in the field
- Training field staff and developing providing fora that enable them to work together and share information
- Defining what we need to train professionals in to enable them implement One health
- Developing models that are effective and can be standardized



# B4 HEALTH

**B**REAKING **B**ARRIERS - **B**UILDING **B**RIDGES  
TO DELIVER PUBLIC HEALTH





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&  
GOD BLESS

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