

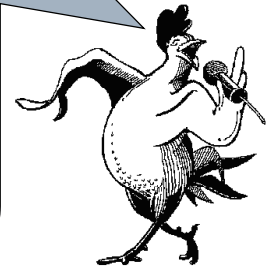
## Mitigation of HIV/AIDS Impact and Wildlife Conservation through Improved Village Poultry



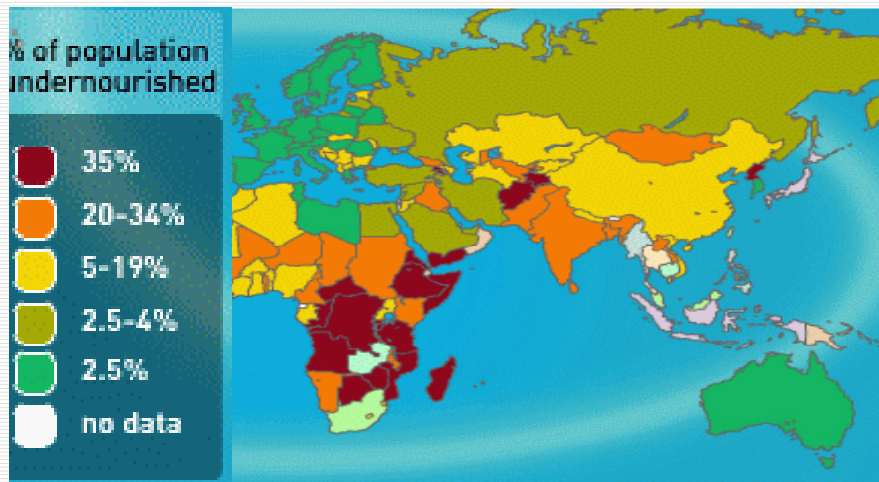
## Acknowledgements

Thanks to:

- **AHEAD** - for getting me here!
- **ACIAR** - Australian Centre for International Agricultural Research
- **AusAID** - Australian Agency for International Development
- **FAO** - Food and Agriculture Organization of the United Nations
- **WCS** - Wildlife Conservation Society & Community Markets for Conservation
- **Farmers, extension workers, veterinarians, researchers and NGOs**



## Malnutrition, Food Insecurity and HIV/AIDS



United Nations World Food Programme. Interactive Hunger Map 2003

## Why village poultry?

In mixed farming systems in Southern Africa:

- ❑ very few households own cattle (~10-20%)
- ❑ some own small ruminants (~30-40%), but
- ❑ most own village poultry (70-80%)

## Why village chickens are important to millions of people ....

Criterion	Mozambique (172 of 177)*	Zambia (165 of 177)	Tanzania (159 of 177)	USA (12 of 177)
Life expectancy at birth (Years)	42.8	40.5	51	77.9
Adult literacy rate (% ages 15 and older)	38.7	68	69.4	99
Combined primary, secondary and tertiary gross enrolment ratio (%)	52.9	60.5	50.4	93.3
Under 5 mortality rate (per 1,000 births)	145	182	122	7
GDP per capita (PPP US\$)**	1,242	1,023	744	41,890

\* UNDP Human Development Index Rank

\*\* Purchasing Power Parity in US\$

## Village poultry: Small birds, big contribution

- ☐ Village poultry production is efficient in terms of costs, labor inputs & environmental impact
- ☐ Lack of essential inputs in rural areas to support intensive poultry production
- ☐ Vital role in rural families as they provide:
  - petty cash
  - high quality protein & micronutrients
  - pest control
  - manure for vegetable gardens
  - social credit – ceremonies & rituals, &
  - assets for women and children

## Egg Exceptional value!

- ☐ One egg contains:
  - ✓ 15 kilojoules of energy
  - ✓ high quality protein– rich in essential amino acids
  - ✓ Vitamins including Vit. A, B12, K & choline
  - ✓ minerals
- ☐ Sterile inside (usually)
- ☐ Easy to store
- ☐ Easy & quick to cook



## Improving village chicken production

- ☐ Interventions must be cost efficient
- ☐ Basic inputs include:
  - management
  - husbandry – disease control, supplementary feeding, shelter
  - marketing
  - group formation
- ☐ Should complement other farm & family activities

## Newcastle Disease (ND)

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- ❑ **Major constraint** where ND is endemic
  - ❑ **50 – 80 % annual mortality**
  - ❑ **Control requires both vaccination and biosecurity**
  - ❑ **Thermotolerant, avirulent I-2 vaccine** facilitates ND control in rural areas beyond the cold chain, administered by eye-drop every 4 months
  - ❑ **I-2 ND vaccine master seed** available free of charge from ACIAR
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## Components of a sustainable ND control program in rural areas

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- ❑ **Coordination of activities**
  - ❑ **Appropriate vaccine & vaccine technology**
  - ❑ **Efficient extension material & methodologies**
  - ❑ **Simple M&E systems** with both technical and socio-economic indicators
  - ❑ **Economic sustainability** – commercialization of the vaccine (~USD 1.00/250 doses) & vaccination services (community vaccinator charges ~USD 0.02/bird), & marketing of surplus birds and eggs
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## Project components

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- ❑ **Community development** – government veterinary & extension services, community leaders & groups, community vaccinators, NGOs
  - ❑ **Vaccine production, quality control and distribution** – Animal Disease Research Institute, Veterinary Services (VICs) & Local Councils
  - ❑ **Extension & training** – facilitate understanding and communication at all levels
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## Approximately 50% female vaccinators

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## ND control extension materials

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- ❑ **Field manual** – veterinarians & supervisors
- ❑ **Training manual** – trainers of community vaccinators, 3-day training course
- ❑ **Laboratory manual** – vaccine production and quality control staff
- ❑ **Extension worker & vaccinator manuals**
- ❑ **Flip chart** – extension workers, vaccinators & farmers
- ❑ **Vaccination calendar**
- ❑ **Radio programs, posters, pamphlet & video**

## General extension/communication materials

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- ❑ **"Healthy chickens, healthy people" flip chart**
- ❑ **"Chicken reproduction" flip chart**
- ❑ **Village chicken health and production field manual**  
HIV/AIDS information
- ❑ **Rural poultry eNewsletter** – published every 6 months



## Impact monitoring & assessment

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- ❑ **Baseline studies**
- ❑ **Participatory rural appraisals**
- ❑ **Vaccination records**
  - Nº. birds vaccinated
  - Nº. farmers participating
  - Nº. active vaccinators
  - Nº. vials distributed & sales
- ❑ **Passive disease surveillance**



## Village chickens and HIV/AIDS mitigation in Mozambique

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Senhora  
Joaquina  
Guenta  
(Grandmother  
with three  
grandchildren)



## Community-based ND control & village chicken restocking of HIV/AIDS affected households

- ❑ ND control program at village level implemented by community vaccinators (who are also volunteer carers) with vaccination vouchers for vulnerable HHs
- ❑ Restocking of vulnerable HHs with one rooster and three hens purchased in the local area
- ❑ Poultry for restocking were held in quarantine for one week and vaccinated against ND prior to distribution
- ❑ Beneficiaries received training in ND control and low cost village poultry husbandry
- ❑ Funded by FAO

## Impact of pilot activities after 12 months

Total # of participating HHs	<b>98</b>
- # Female-headed HHs	63
- # Grandparent-headed HHs	29
- # Child-headed HHs	6
Total number chickens	<b>364</b>
% HHs with chickens after 12 months	<b>58</b>

## Triple benefits of the village chicken & HIV/AIDS project

1. Direct support to the people affected or infected by HIV/AIDS
2. Income generation for the carers and the community-based organizations
3. An increase in the carrying capacity of the communities in terms of supporting welfare activities

## Village chickens and wildlife conservation in Zambia

Farmers and their chickens .....



## Village chickens and wildlife conservation in Zambia

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... and the wildlife



## Improvement of village poultry production by communities surrounding South Luangwa National Park

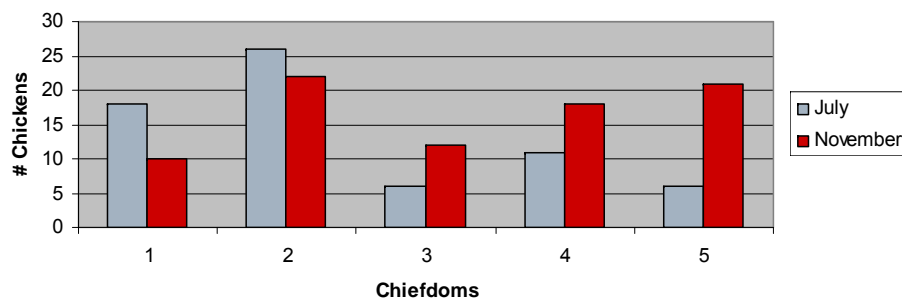
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- ☐ Tsetse fly infested area → No cattle; very few goats; village chickens are very important
  - ☐ ND outbreaks occur most frequently from August to October
  - ☐ Pilot project commenced in May 2007 in five Chiefdoms funded by WCS and implemented in collaboration with COMACO
  - ☐ ND vaccination campaigns implemented by community vaccinators in July and November 2007 using imported NDV4-HR vaccine
  - ☐ COMACO promotes biodiversity conservation by promoting sustainable development
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## Results to date in vaccinating areas

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Vaccinating areas 2007: Av. # chickens per HH



## Preliminary analysis

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- ☐ The July 2007 ND vaccination campaign was implemented in the face of an outbreak in one chiefdom
  - ☐ Best to start new control activities well in advance of the period when ND outbreaks occur more frequently
  - ☐ More chiefdoms are requesting to join the ND control program
  - ☐ Low-cost village poultry husbandry activities can now be promoted
  - ☐ Further study is required to determine if increased chicken numbers will translate into decreased bush meat sale and consumption
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## Conclusions

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Increased village chicken production also has the potential to:

- ❑ Improve food security, assist in poverty alleviation,
  - ❑ Assist with HIV/AIDS mitigation, and
  - ❑ Decrease bush meat consumption in rural populations.
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## Healthy poultry, healthy people

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Thank you !  
Zikomo !  
Obrigada !  
Asante sana !

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