

# STAMP OUT SLEEPING SICKNESS

**An Innovative  
Intersectoral Approach  
to the Control of Neglected  
Zoonotic Disease in Uganda**

**Anna Okello MRCVS**



An intervention campaign by CEVA Santé Animale, the Universities of Edinburgh, UK and Makerere, Uganda, the Coordinating Office for the Control of Trypanosomiasis in Uganda (COCTU) and IKARE





## **Contents**

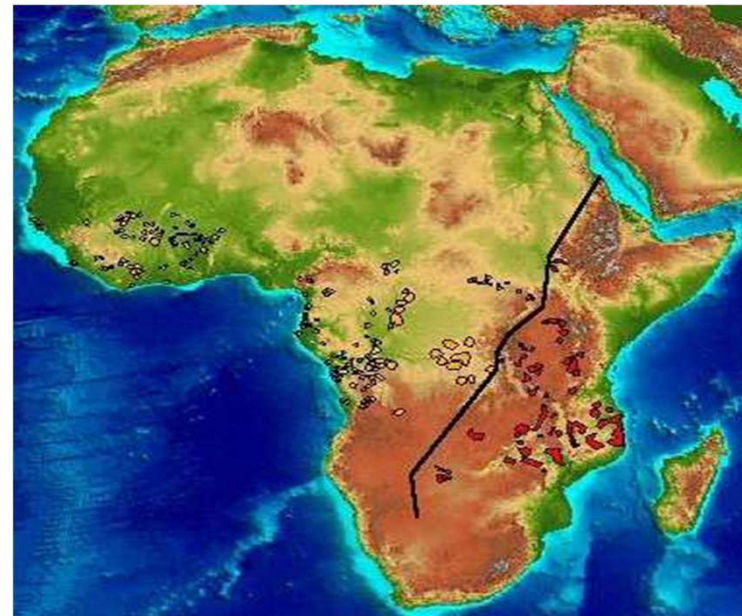
---

- 1. What is the Problem?**
- 2. Why the Emergency?**
- 3. 2006-7: SOS Phase I**
- 4. 2008-2010: Where did SOS get to?**
- 5. 2010-2011: Phase II –Where is SOS going?**
- 6. Achievements and Challenges of intersectoral collaboration**

# Background to Sleeping Sickness (HAT) in Africa



West Africa:  
Chronic Disease  
*T. b. gambiense*



East Africa:  
Acute Disease  
*T. b. rhodesiense*

- Spread by the tsetse fly (*Glossina* spp)
- Uganda the only country in Africa with foci of *both forms*

# Human African Trypanosomiasis (HAT)

WHO Classified NZD 2009



## Stage I: Febrile Illness

Recurrent Fever, Severe Headaches,  
Extreme Fatigue, Swollen LNs, Muscle and  
Joint Aches

**Dx:** Microscopy on blood smear



## Stage II: CNS Involvement

Confusion, slurred speech, weightloss, seizures,  
encephalitis, disturbed sleep patterns

**Dx:** CSF Exam (lumbar puncture)

**Without Treatment, Prognosis is Death in Both Acute and Chronic Cases**

# Why Neglected?



DRUG	TYPE	STAGE	YEAR DEVELOPED*
Suramin	Acute	I	1921
Pentamidine	Chronic	I	1941
Melarsolprol	Acute & Chronic	II	1949
Eflornithine	Chronic	II	1990

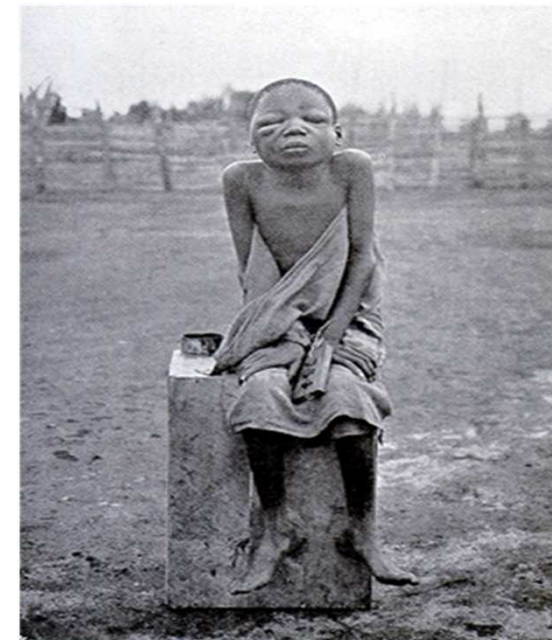


Photo: Robert Koch  
Uganda, 1906

[http://www.who.int/zoonoses/neglected\\_zoonotic\\_diseases/en/index.html](http://www.who.int/zoonoses/neglected_zoonotic_diseases/en/index.html)

# The "Silent" Killer?



**"Textbook" Nagana**  
(E.g *T. congolense*, *T. vivax*)

- Poor growth/ loss of condition
  - Anaemia
  - CNS involvement



**Clinically "Normal" HAT Reservoir**

- (E.g *T.b rhodesiense*)
- Very low persistent parasitaemia
  - Considered healthy by owner/vet

# Why the Emergency?



**By 2005 there was a Public Health Crisis in Uganda**

**Sleeping Sickness had spread to 8 new districts in as many years,  
with only 150 km separating the two forms**

# STAMP OUT SLEEPING SICKNESS INITIATIVE

---



- **Public Private Partnership**

- IKARE
- CEVA Sante Animale
- COCTU
- WHO/MoH Uganda
- MAIF Uganda
- Makerere University
- University of Edinburgh

- **Overall aim to treat the problem *at source* in a sustainable way**



# 2006-7: SOS Phase I Emergency Intervention



**Injecting Veriben™**



**RAP Using Vectocid™**

Approximately 250 000 cattle treated in 5 districts

- 70% Reduction in *T. brucei* spp 3m post-tx
- Final Year Veterinary Students exposed to Community “In-Service” Training

# How to Achieve Sustainability?

---



**One-off Mass Treatment Intervention Not Sufficient Long Term.....need to address the private good aspects**

- Cattle require ongoing spraying to prevent re-infection
  - Transition from “Top-down” to “Bottom up”
  - Accessibility to veterinary services and drugs
- Political Goodwill to prevent re-introduction into “clean” areas

**EMERGENCY TREATMENT**



**COMMUNITY OWNERSHIP?**

# 3V Vet Initiative



- Objective: build a permanent distribution chain for veterinary products and services in rural areas
- 5 Makerere graduates recruited by High Heights (HHS) with IKARE/CEVA support
- Job descriptions and clear work agenda put in place
- Establish spray team network to increase outreach of spraying activity



Dr. Were at his shop opening

# 2009-2010: Where are we?



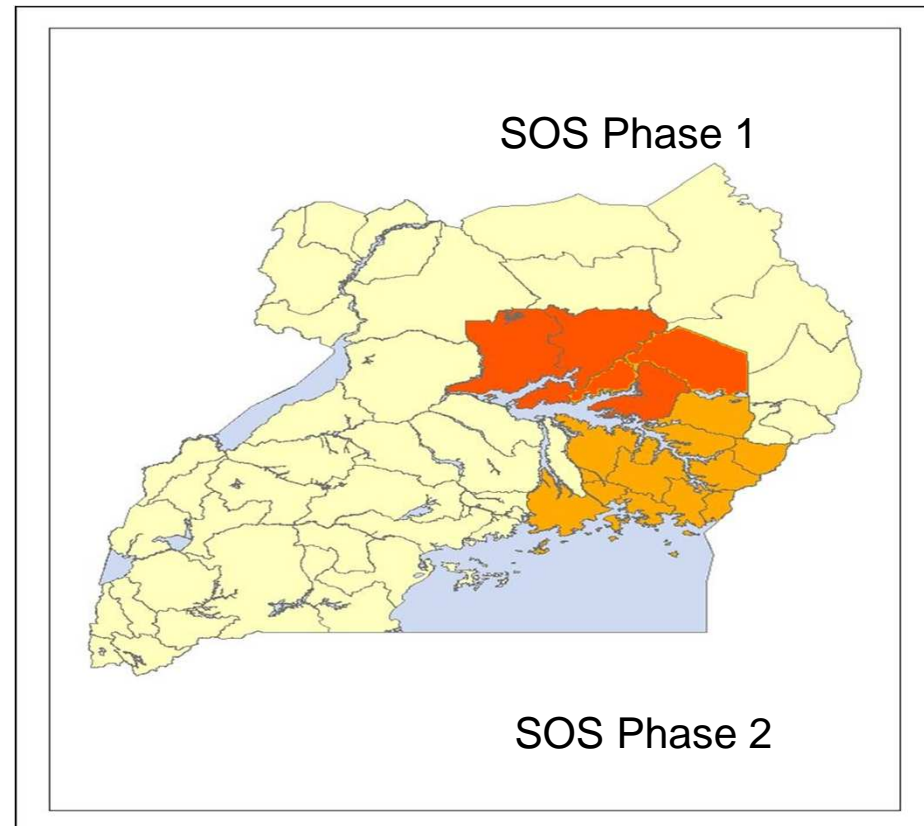
- Created employment: 75 spray teams commercially spray 40 000 cattle on regular basis (sales)
- Provided undergraduates with an opportunity for hands-on in-field training and community service
- Improved animal health through 3V Vets clinical services and distribution networks
- Prevented convergence of acute and chronic HAT



# 2011: Where are we Going?



- Roll-out of SOS activities under Mintracs/DFID to neighbouring districts
- Roll-out of 3 V Vets and spray tems in parallel, with IKARE/CEVA funding and support
- More integrated and holistic approach – veterinary students, medical students, agriculture and farming students



# What Challenges Remain?



- **Situation at cattle markets** needs addressing – enforcement of policy and increasing community awareness (messaging, building community confidence etc)
- **X-discipline co-operation** is extremely difficult. MINTRACS increases this understanding
- **Who Pays?** Currently, livestock owners pay for this “public good”, driven by “levers to purchase” – it remains a debate as to who foots the “public” programme



# Integrated Partnerships for NZD Control



- Political Goodwill + Advocacy
- Sense of Urgency
- Readily available "Toolbox"
- Cheap, effective intervention
- Strong and Active partners
- Alignment of Interests

**Flexibility, Vision,  
Organisation and  
Commitment**

# Thank You!



**"We have all started and legalized our businesses which have changed the lives of our farmers and our- selves. We now feel more relevant and have addresses. I have particularly liked the whole venture because it has kept me awake, busy and a lot more responsible."**

*Emanuel Isingoma, 3V Vet*

