



SILAB For Africa a LIMS for African Country and Animal Identification Registration Traceability system

Ercole Del Negro

African Symposium on "Animal identification and recording (AIR) systems
for traceability and livestock development in sub-Saharan Africa"

14-16 April 2015, Pretoria (South Africa)

About us



- Istituto Zooprofilattico Sperimentale is a **public health Institution**, founded in 1941, belonging to the National Public Health Service
- The Institute is a **technical-scientific body** of the Ministry of Health and Regions
- About **500 people** are currently working at the Institute (veterinarians, biologists, chemists, statisticians, mathematicians, engineers, computer scientists, technicians, clerks, administrative staff)





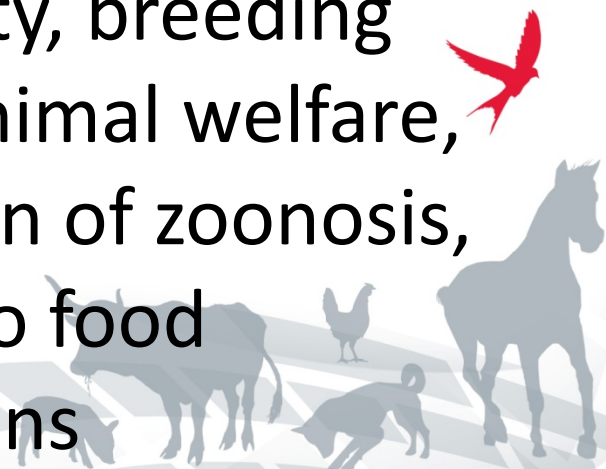
IZSAM G. CAPORALE
TERAMO

We are here



Mission

- **To protect human health**, satisfying the need of the Italian Health System and of citizens, for public health, expressed in food safety, breeding health, animal welfare, prevention of zoonosis, support to food productions



Fields of activities

**Animal Health and
welfare**

Food safety

**Health and
environment**

**Epidemiological
surveillance**

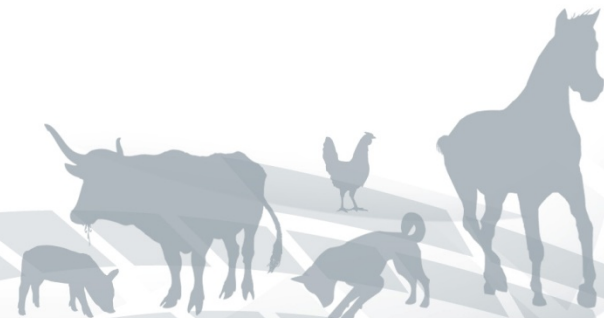
**Information systems
and animal identification
& registration**

Training





Main Tasks

- **Microbiological and chemical laboratory tests** for the diagnosis of *animal diseases*, including zoonoses, for microbiological and chemical *safety of animal foodstuff, food of animal origin* for human consumption and *safeguard* of sea and terrestrial ecosystem;



Main Tasks

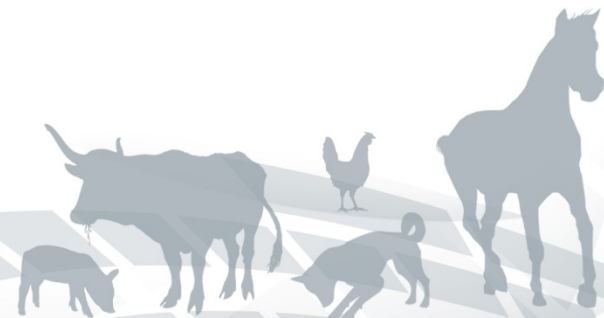
 **epidemiological surveillance** on animal health, animal production and food safety;

 **production** of vaccines, reagents and immunological products for animal diseases prevention and diagnosis;



Main Tasks

- **support, assistance and sanitary information *to breeders* for the *control and eradication of infectious diseases* and the development and *improvement of animal productions;***



Main Tasks

- **training** of professional and technical operators in animal health, public health and animal production;
- **international co-operation**;
- **management of data** processing and monitoring systems.



Main Tasks

- **accreditation and certification** of laboratories and veterinary public health services, including information systems for the management of laboratories data, emergencies and prophylaxis campaigns;
- **environmental control** to protect human, fish and other wild animals;
- **animal welfare**
- **IT solutions**



Quality System

- Since 1995 the Institute is accredited according to EN 17025
- Since 2004, Training Services of the Institute are acknowledged to be conform to ISO 9001:2008 norm



OIE acknowledgements

- OIE Collaborating Centre for Animal Welfare, Epidemiology, Food Safety and Veterinary Training
- OIE Reference Laboratory for
 - Bluetongue
 - Contagious Bovine Pleuro-Pneumonia
 - Brucellosis
 - West Nile Disease





FAO acknowledgement



Reference Centre
Veterinary Epidemiology



National Reference Centers

- **National Reference Center for:**
 - Exotic animal diseases
 - Epidemiology and risk analysis
 - Brucellosis
- **National Reference Laboratory for:**
 - Listeriosis
 - Campylobacteriosis
 - PCB and dioxins
- **National Center for Animal Identification and recording and IT solutions**



Research

- Research is based on the following strategic lines:
 - **Surveillance methods** in veterinary public health, in particular zoonoses, antimicrobial resistance and risk analysis in production and consumption of food of animal origin;
 - **New methods** for the diagnosis of animal diseases and food of animal origin analysis;



Research

- **Study of etiology and pathogenesis** of infectious and communicable diseases of animals;
- **Production of experimental vaccines**, new generation immune-stimulants and diagnostic kits;
- **Accreditation and certification of laboratories** and veterinary public health services.



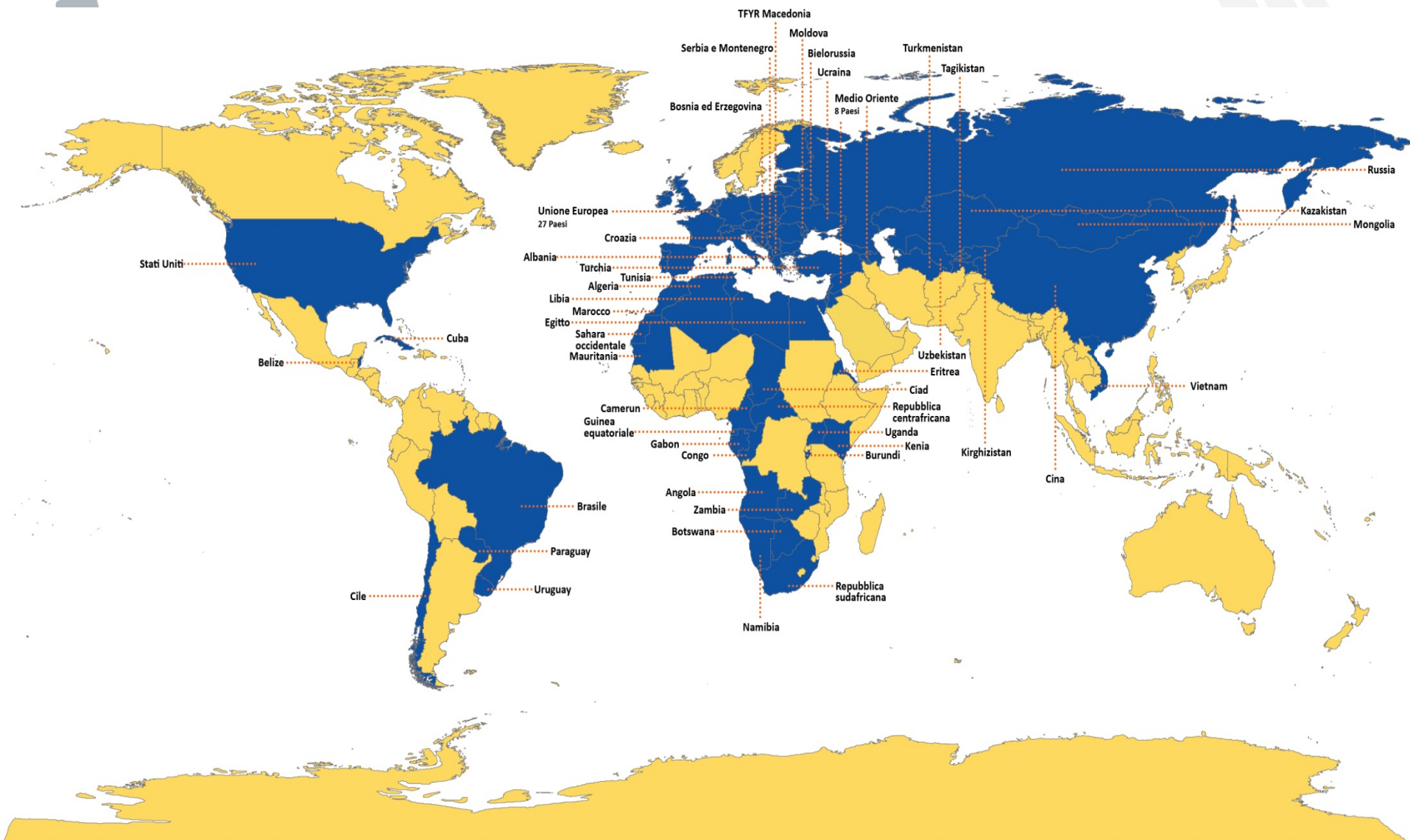
Research

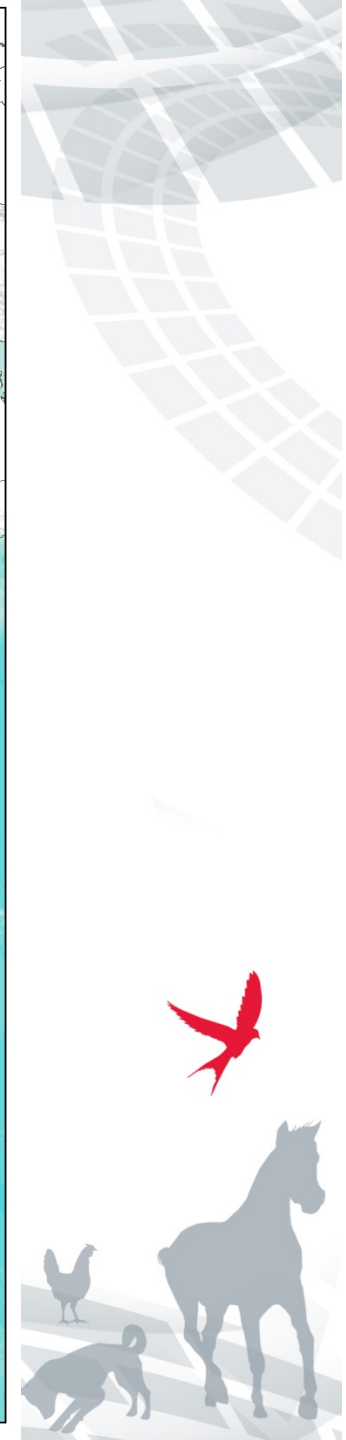
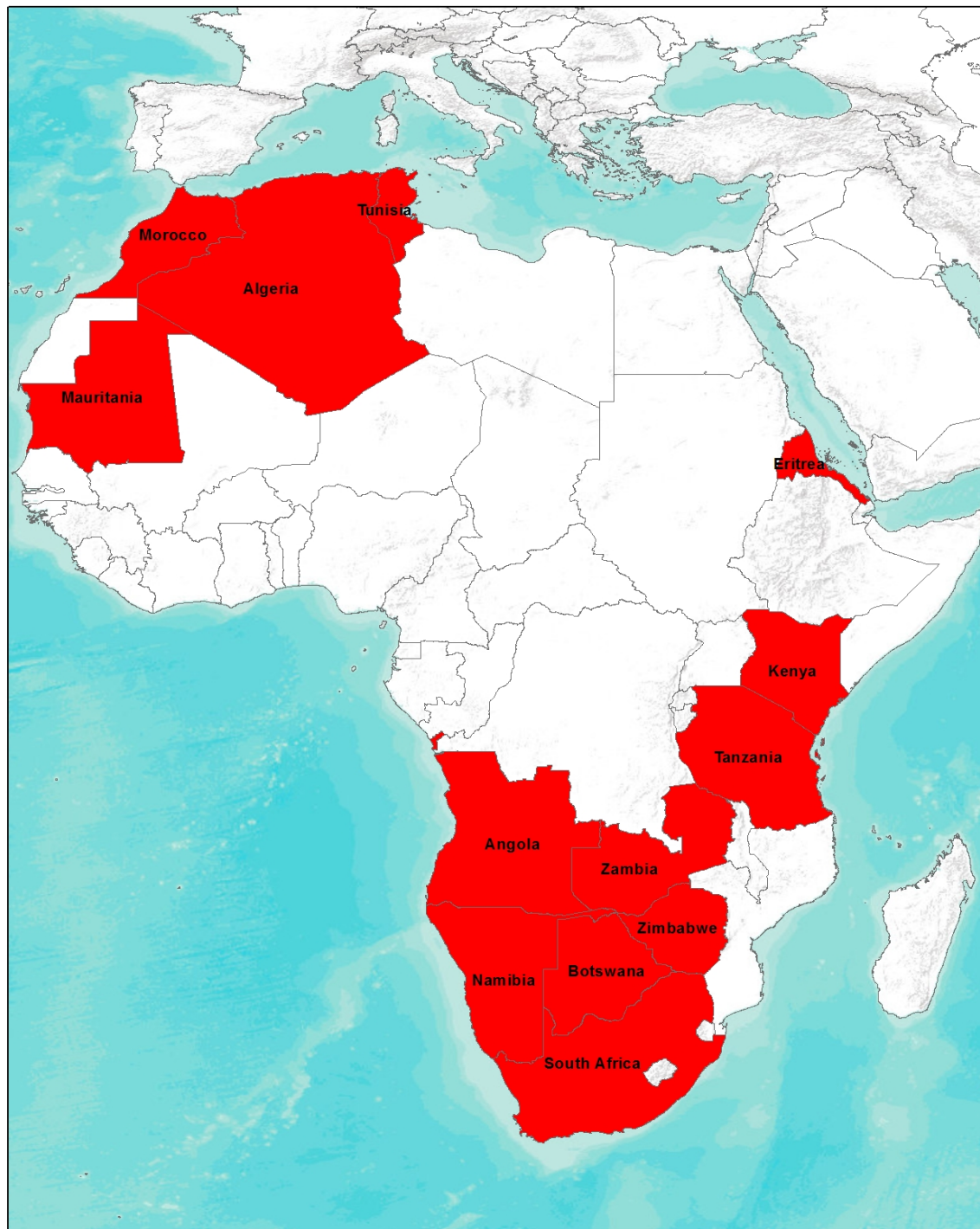
- **New methods for environmental control** to protect human, animals and fish;
- **Animal welfare;**
- **IT solutions**





International cooperation





All started in Namibia

**CENTRAL VETERINARY
LABORATORY**

Started in 1996

**In 2005 the activities were officially
recognized by the
Namibian MAWF & the Italian MH**



A woman in a dark headwrap and light-colored shirt is herding several large, brown and white cattle with long, curved horns. They are walking on a dry, dusty path in a savanna-like environment with sparse trees in the background. The text is overlaid on the image, centered and in a bold, sans-serif font. The words 'CBPP', 'African Horse Sickness', 'Equine Encephalosis', 'Rift Valley Fever', 'Lumpy Skin Disease', 'Dourine', 'Heartwater', and 'Tick Borne Diseases' are in red, while the rest of the text is in black.

**Attention has been focused on diseases
of common interest such as **CBPP**,
African Horse Sickness , **Equine**
Encephalosis , **Rift Valley Fever**, **Lumpy**
Skin Disease, **Dourine**, **Heartwater** and
others **Tick Borne Diseases****

Activities and/or projects:

- **CBPP**; Zambia, Angola, Botswana, Tanzania and Namibia + *Mauritania and ILRI-Kenya*
- **Food Safety**; Angola, South Africa and Namibia
- **Identification and registration system**; Angola, Zambia + *Eritrea*
- **SILAB**; Zambia, Botswana, Namibia, Tanzania and Zimbabwe.



Activities and/or projects:

- **Ticks identification**; Botswana, Zambia, Angola and Namibia
- **Dourine**; Botswana and Namibia
- **RVF in Wild animals** Namibia
- **Brucellosis**; Zimbabwe + **Eritrea**
- **Animal Welfare**; South Africa and Namibia



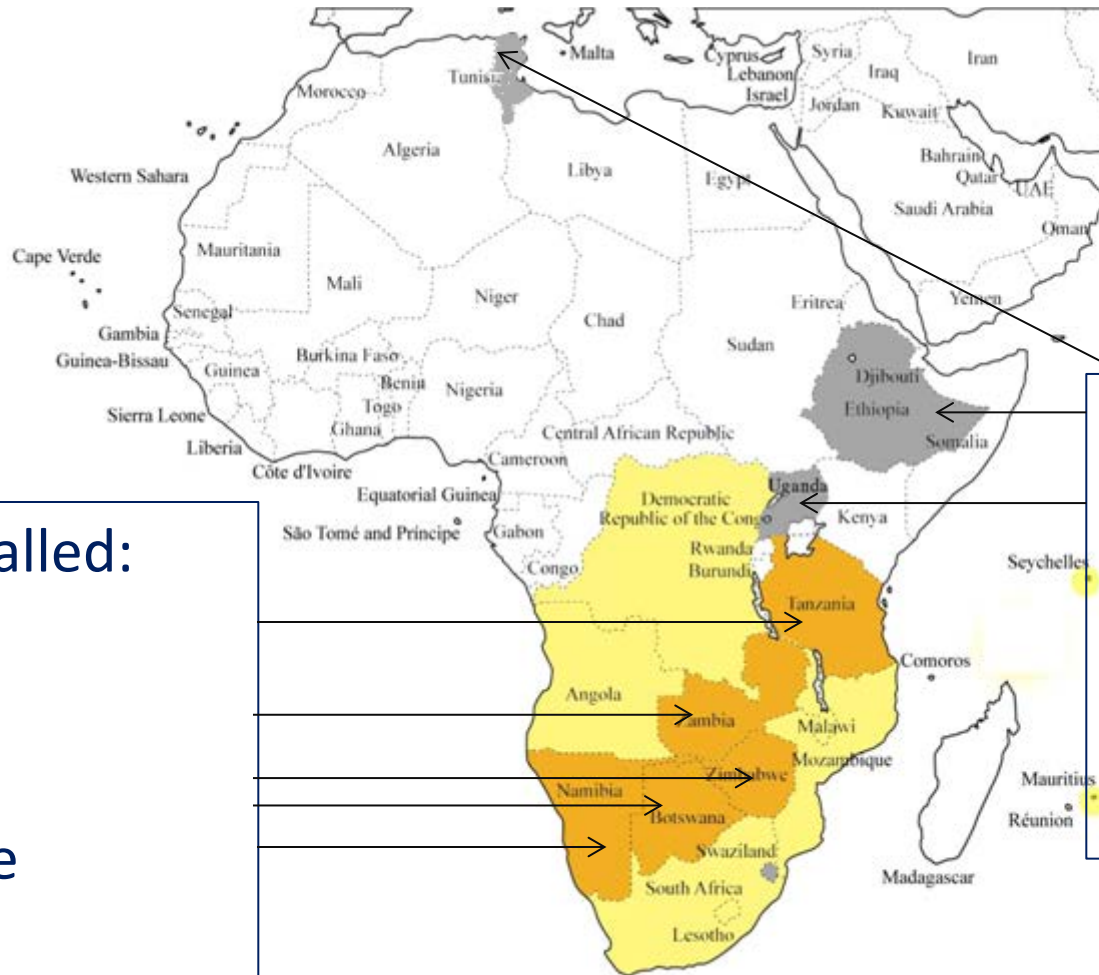
A photograph of a herd of Zebu cattle with large, curved horns walking along a dirt road in a rural, wooded area. A man is visible walking alongside the herd on the left. The text "Activities and/or projects:" is overlaid in red at the top.

Activities and/or projects:

**National Animal Disease
Diagnostics
and Epidemiology Centre in the future
as partner?**

SILAB in African Countries

LIMS
FAO support



SILABFA installed:

- Namibia
- Botswana
- Zambia
- Zimbabwe
- Tanzania

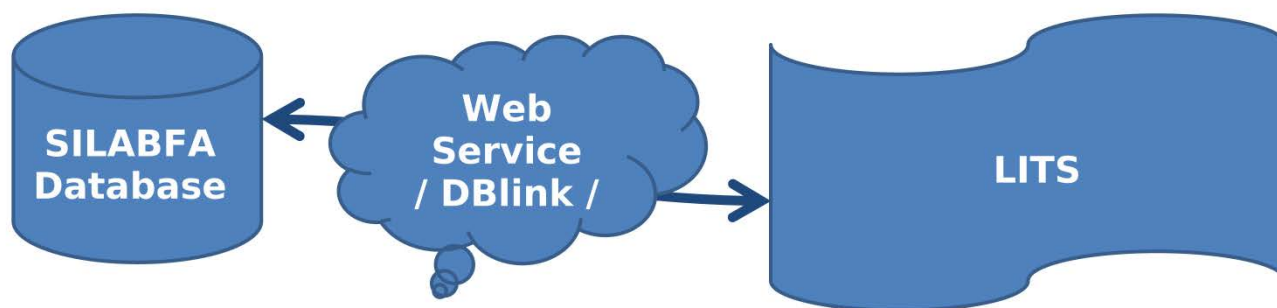
SILABFA

requested:

- Ethiopia (AU-PANVAC)
- Uganda,
- Tunisia

SILAB and AIRT

- A LIMS system is an important element of the chain of the traceability system. The chain is completed if the laboratory and the veterinary field work are well connected



SILAB and AIRT

The inter-linkage and inter-operability:

- improve the quality of the entire cycle and the quality of data
- allow to insert data only once in one system and make data automatically available to other systems
- enables rapid and fluid data transfer
- more accurate timely interventions, information entries and retrieval of data in animal health and food safety



SILAB and AIRT

Interoperability in Africa:

- 2014 SILAB – LITS in Botswana (next BAITS)

Over 200.000 livestock (bovine) keepers information is now available to SILAB from the LITS database and over 3.000.000 bovines are identified and traced in SILAB

- 2015 SILAB – NamLITS in Namibia

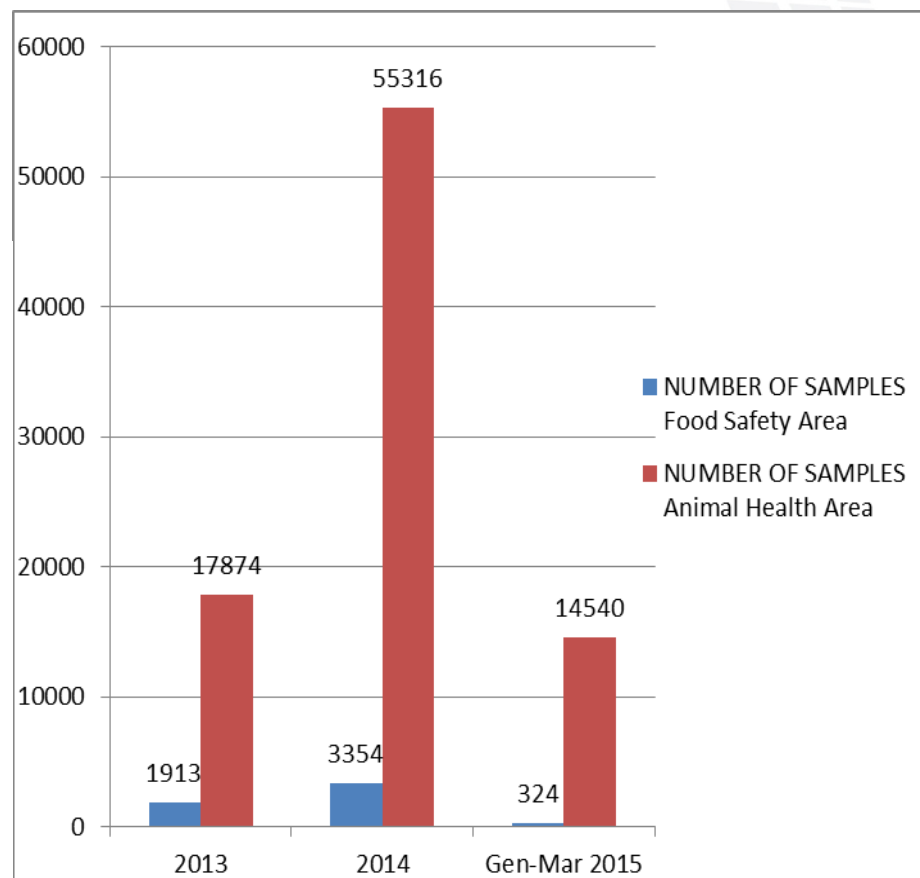
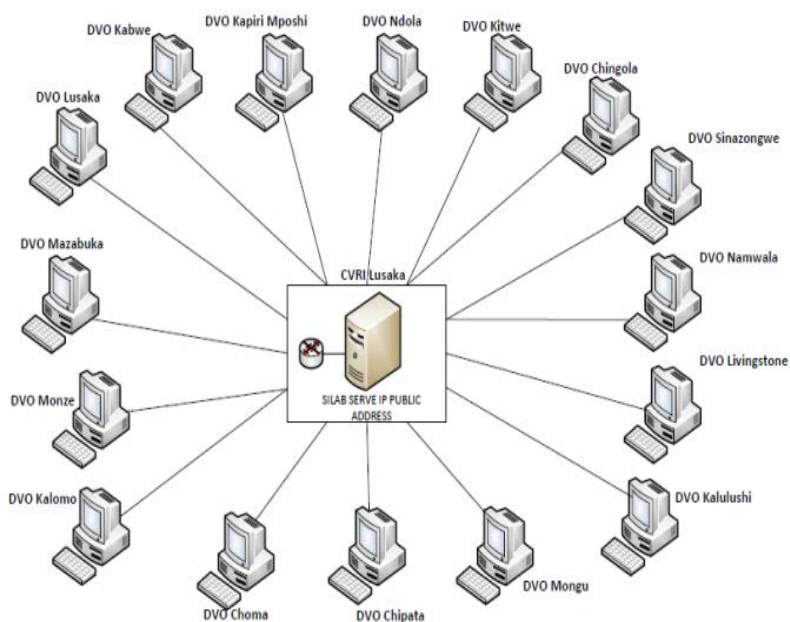
140.000 Herds, 20.000 Establishments, 110.000 Keeper (next animal ID)

- SILAB – TANLITS next



SILAB in ZAMBIA

- 2012 SILAB in CVRI



AIRT in ZAMBIA

2015 MoU between The Ministry of Health of the Republic of Italy and Ministry of Agriculture and Livestock of the Republic of Zambia was signed focusing mainly on the development of a Cattle Identification and Registration System in Zambia

The AIRT System in Zambia will contribute to the following objectives:

- Improvement of public and animal health;
- Increased capacity of control of animal diseases, particularly zoonosis;
- Strengthening the capacity of marketing of meat;
- Increased sustainable livestock production.



AIRT in ZAMBIA

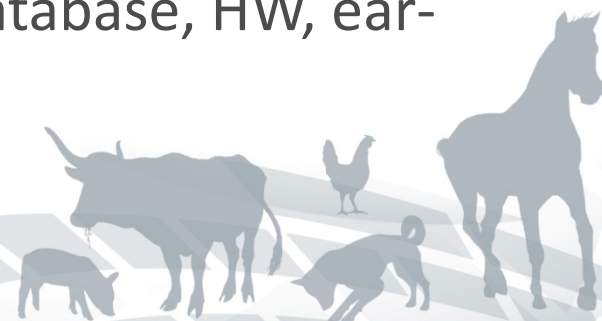
- The pilot project a limited area (17.000 cattle)
- The main objective of the pilot project is to propose an AIRT implementation strategy based on the Zambian situation. It will last about 12 months.



AIRT in ZAMBIA

At the end of the pilot project valuable information will be available on:

- AIRT Organization;
- Cattle production systems;
- AIRT law;
- Data Communication & Infrastructures needs for a correct data management;
- Procedures and training material for field activities;
- Technical specification for AIRT materials (database, HW, ear-tags, etc.);
- Awareness campaign needs.



SILAB and AIRT in ZAMBIA

Interoperability will be ensured via
Web Services

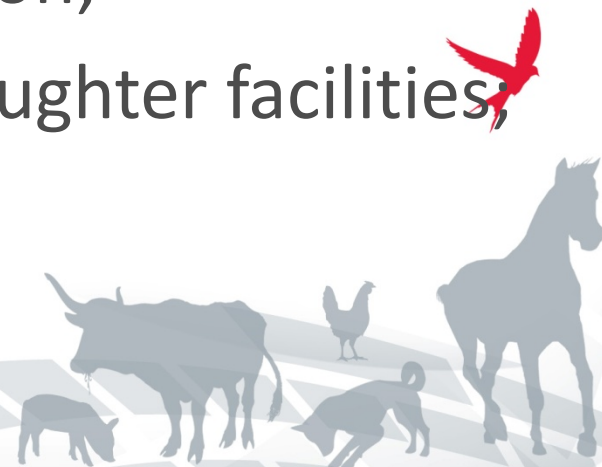


ANGOLA AIRT

The “**Zoonoses Prevention: Integrated Project on Public Health**” started in Angola, Huila Region on July, 2014 improving public health through the reduction of zoonosis and food-borne disease.

Three main activities are encompassed:

- animal identification and registration;
- improving of meat hygiene and slaughter facilities;
- training and laboratories update.



ANGOLA AIRT

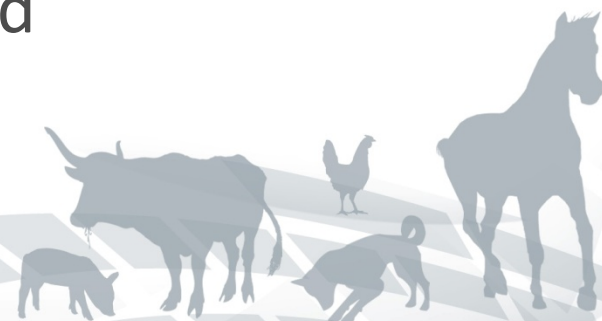
February 2015 Pilot project on AIRT started in Huila Region covering 30.000 heads (cattle):

1. Census of commercial farms and traditional breeders (electronic register made including geographic coordinates)
2. Sensitization and information campaign
3. Assessment of Veterinary Services, the infrastructures, IT equipments, documentation, etc
4. Proposal for ID code



The way ahead

- ear tags supply from the IZSAM;
- paper forms (movement permit, slaughter register, etc.) revised and adjusted to include individual animal identification;
- ear tagging, including training on ear tag application data recording and traceability implementation;
- electronic database fully implemented





IF YOU WANT TO GO FAST, GO ALONE.
IF YOU WANT TO GO FAR, GO TOGETHER.

- AFRICAN PROVERB

Thank you!

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