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Veterinary Epidemiology

ANIMAL IDENTIFICATION AND RECORDING FOR ANIMAL DISEASE PREVENTION AND CONTROL

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- I&R system and AHIS
- Objectives of AHIS
- Inputs and outputs of an AHIS
- Key points for AHIS development
- Systems interoperability (Examples)

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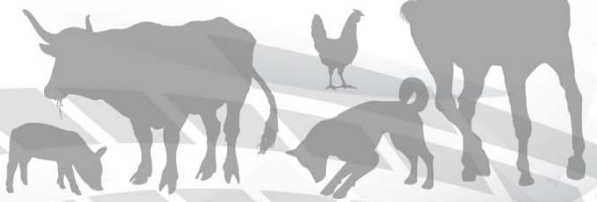
Foreword

- Any strategy for animal disease prevention and/or control requires the establishment of an animal health information system (**AHIS**)
- An effective AHIS should be able to **collect**, **manage** and systematically **analyse** relevant epidemiological data, in order to generate appropriate information for **policy-makers** and other **stakeholders** along livestock food value chains.



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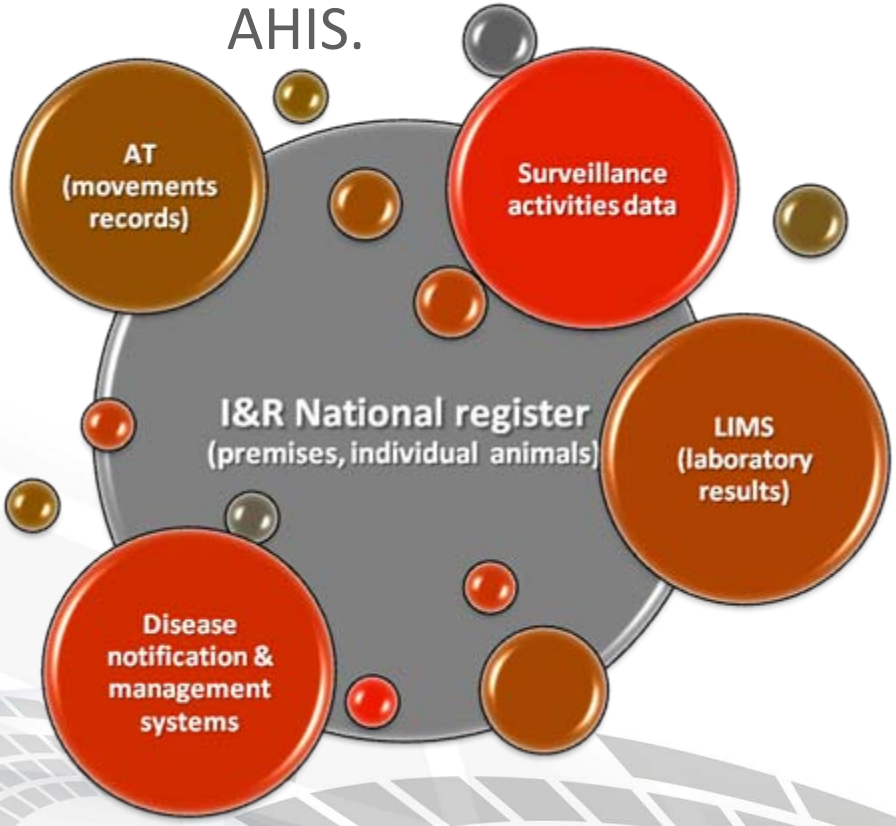
I&R system and AHIS

The presence of a fully operative animal identification and registration (I&R) system as well as the existence of an animal traceability (AT) system are pre-requisites for the establishment of an effective and fully integrated AHIS.



AHIS

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I&R and AHIS

Choices made in I&R influence AHIS performances

Animal electronically identified

All relevant data (origin, movements, health status, etc.) are recorded and updated

Samples collection in the framework of disease control programmes

LABORATORIES

Central DB

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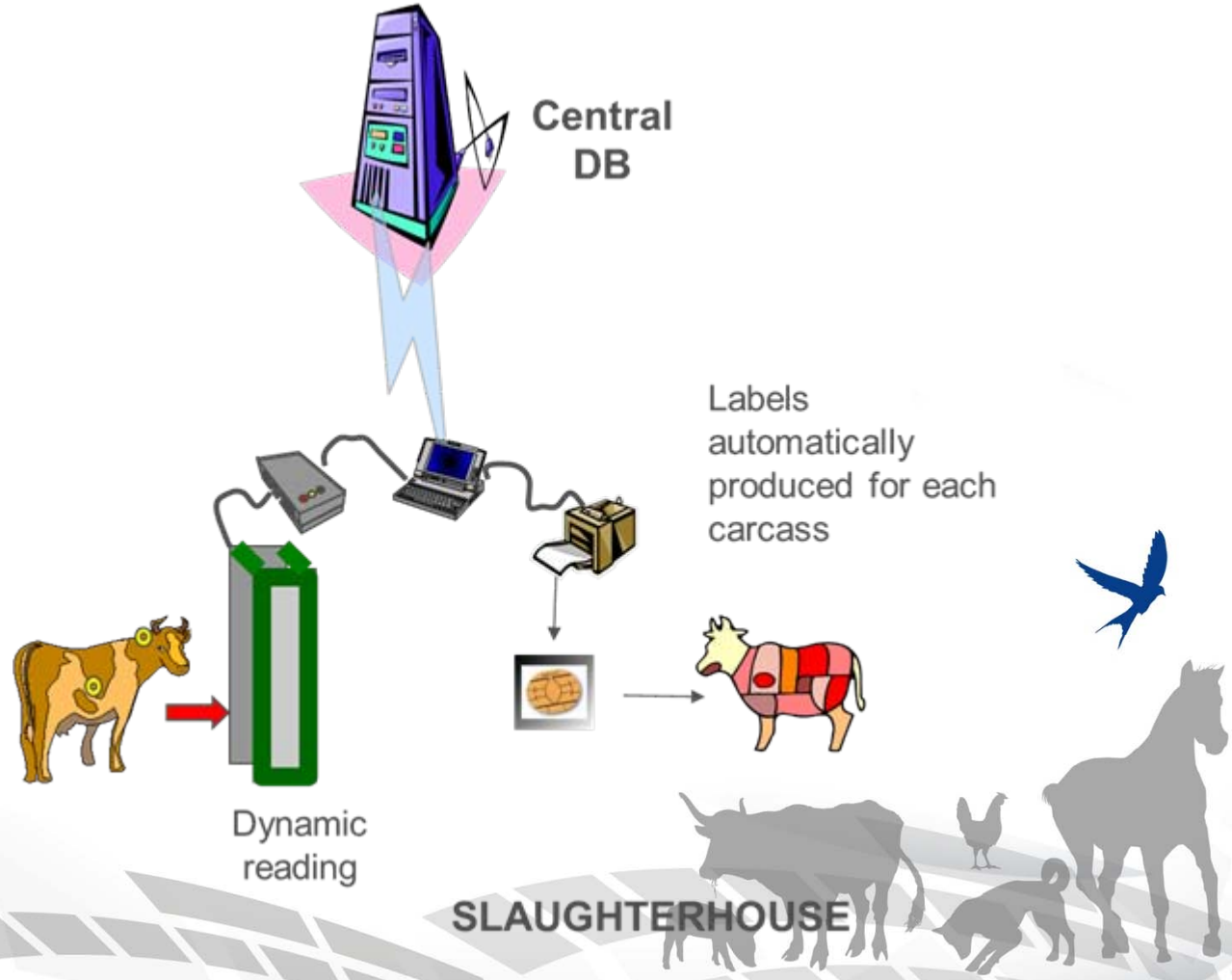
I&R and AHIS

Choices made in I&R influence AHIS performances



I&R and AHIS

Choices made in I&R influence AHIS performances

- Not only depending on identification means

But also for example:

- Epidemiological unit choice (holding vs herd vs village, pastures codification….)
- Data collected for each premise / group of animal / individual animal (for examples geographic coordinates)
- Rules for movements notification (movements to pastures, nomadic herds, …)

AHIS Objectives

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Objectives

1. Support animal disease notification system
2. Management of animal health emergencies
3. Enhance surveillance and early warning
4. Support Risk assessment

Benefits

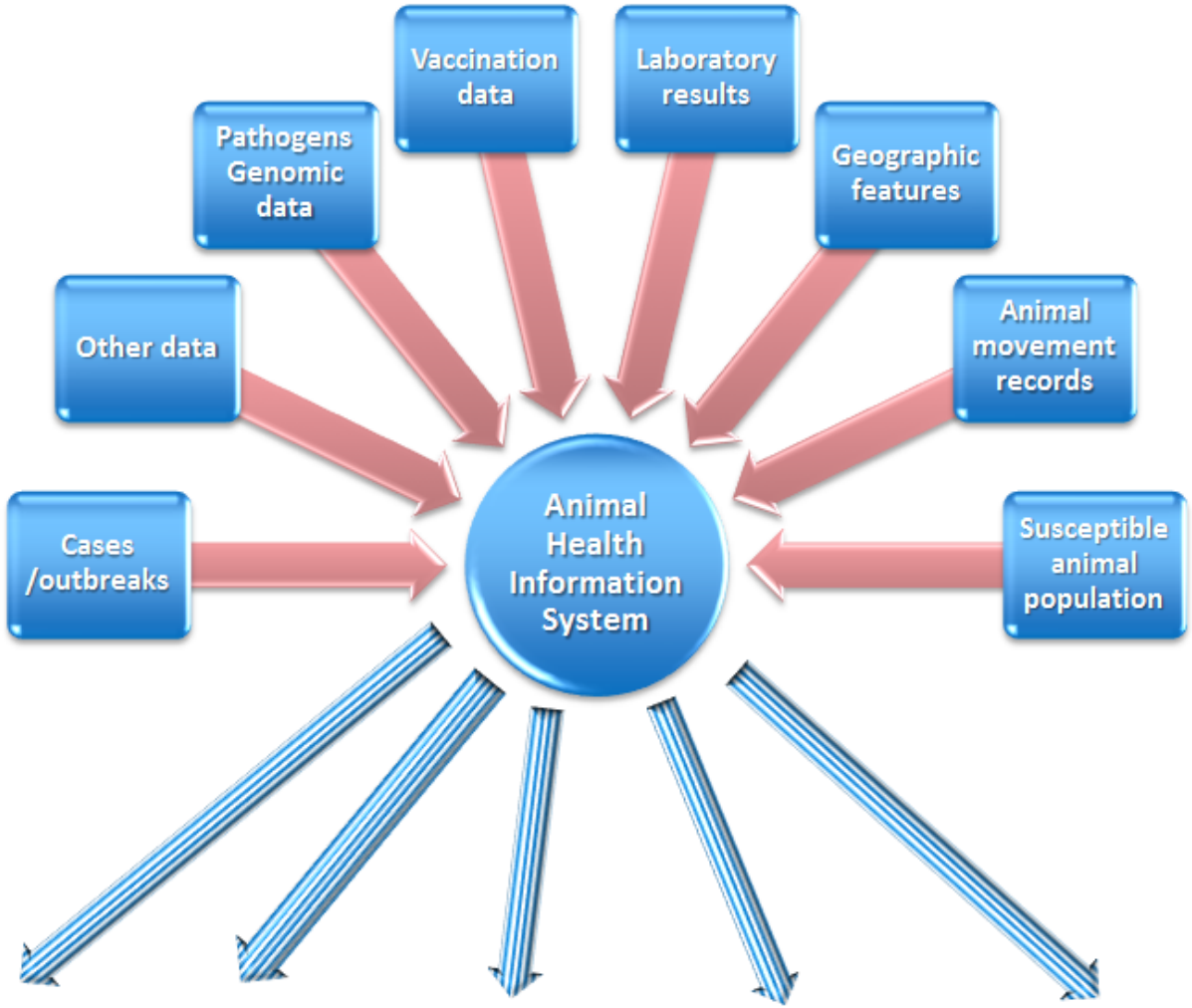
- International obligations
- International credibility

- Efficacy of interventions
- Reduction of consequences

- Free of disease demonstration
- Health status and certification

- Import / Export risk assessment
- Support zoning / regionalization / compartmentalization strategies
- Support to decision-making process

Inputs and output of a AHIS

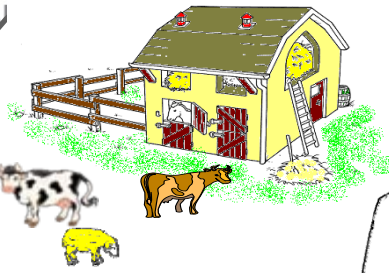


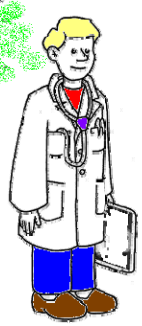
Key points for AHIS development

- AHIS must be based on clear rules and procedures, specifying the responsibilities and tasks of all “actors”
- Data should be validated by those who have produced them
- Respect of the organizational structure, the legal competencies and tasks of the institutions involved
- Integration of different data sources requires data and procedures standardization and the implementation of common dictionaries and common coding systems

Example of integration of I&R and LIMS

1 SAMPLING

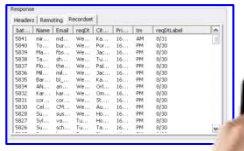




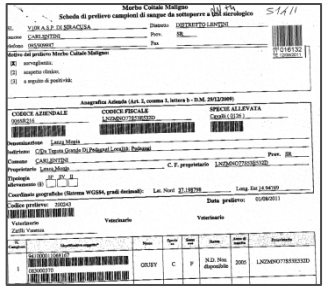
Animal samples

Food samples

2 SAMPLING DATA



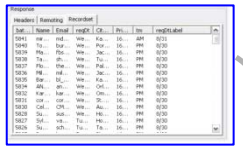
Samples form with a unique *sampling code*



3 LABORATORY

Results of laboratory tests

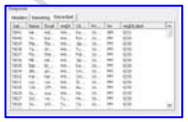
4 TEST RESULTS



Example of integration of I&R and LIMS

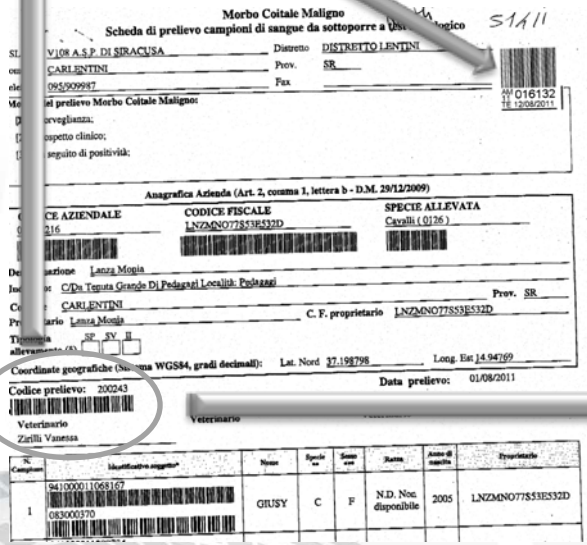
1

SAMPLES REGISTRATION



Sampling data are automatically retrieved

Samples labelling



Sampling code

Scanner

2

SAMPLES TESTING

Test results

3

DIGITAL SIGNATURE

An example of LIMS integration in African countries

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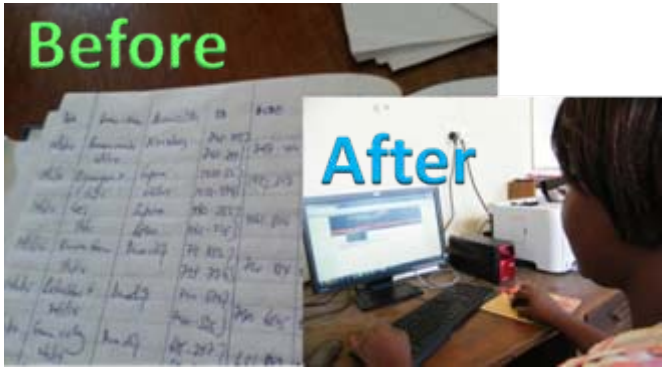
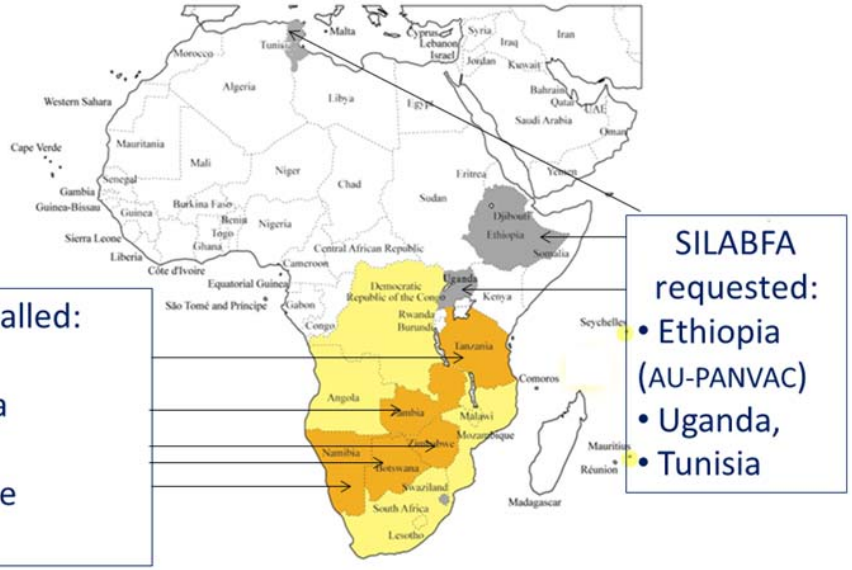
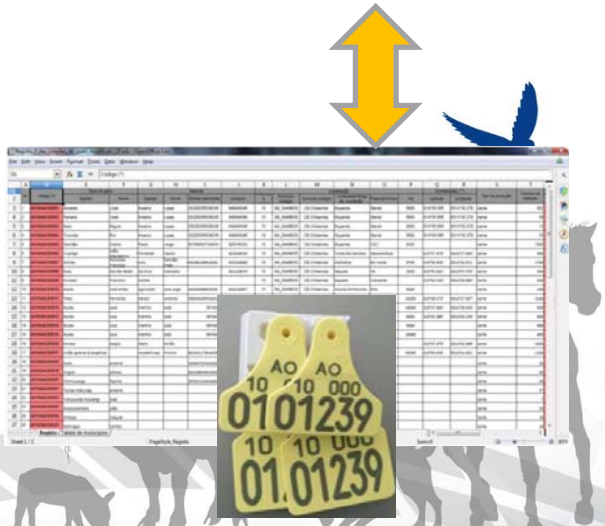
- LIMS web application called "SILAB for Africa" (SILABFA)
- Interoperability with I&R already in place in Botswana and ongoing in Namibia



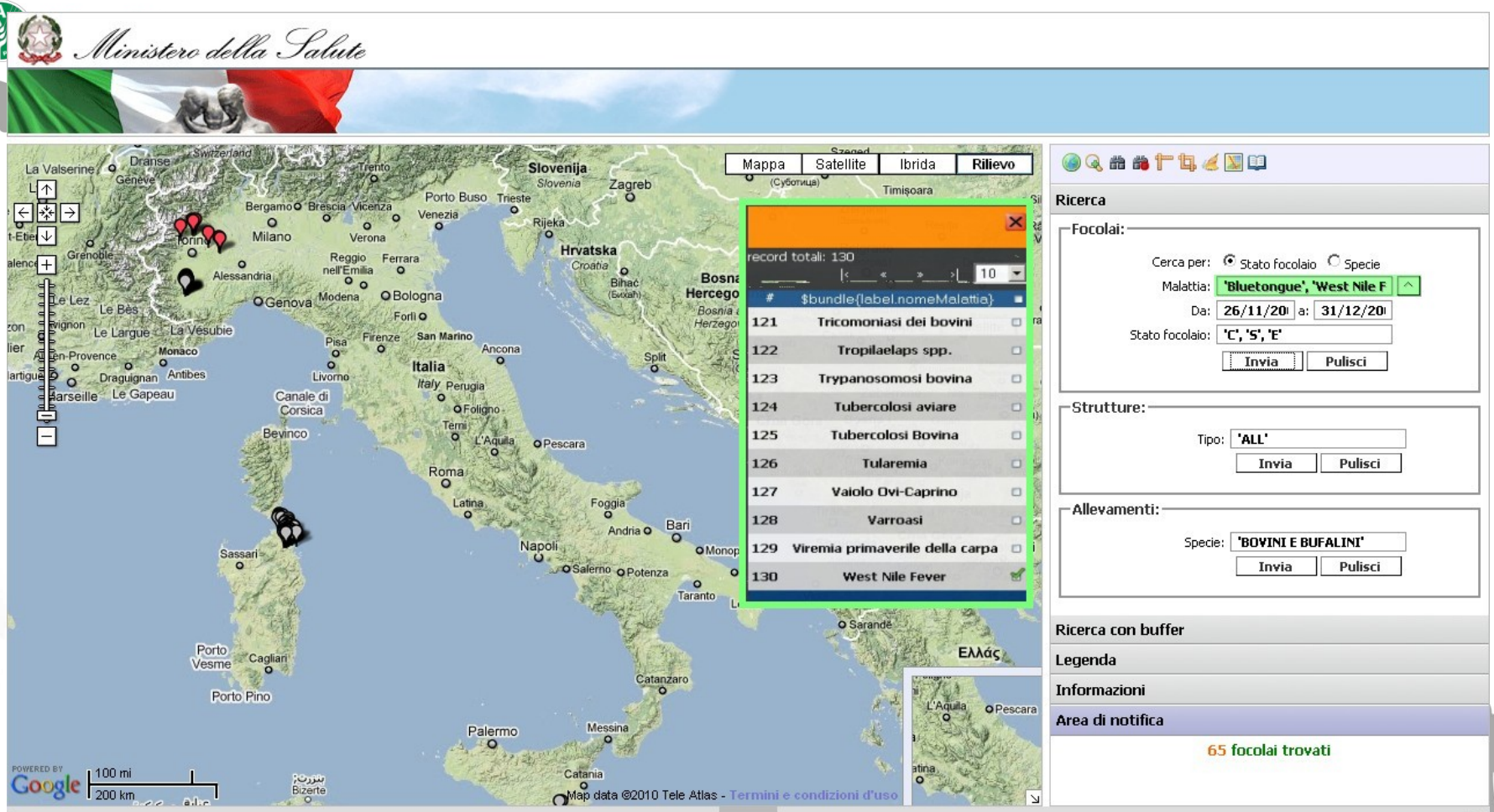


SILABFA installed:
- Namibia
- Botswana
- Zambia
- Zimbabwe
- Tanzania

SILABFA requested:
- Ethiopia (AU-PANVAC)
- Uganda,
- Tunisia



Example of integration with I&R for diseases management: Web GIS



Totale: 65 Esporta la tabella: Cliccare sull'intestazione delle colonne per ordinarne il contenuto

ID azienda	Comune	Provincia	Malattia	Stato del focolaio	Tipo focolaio	Data sospetto	Data conferma	Data estenzione	Vai
480173	PIASCO	CN	Bluetongue	E	P	Wed Dec 17 01:00:00 CET 2008	19/01/09	20/03/09	
152879	BARBANIA	TO	Bluetongue	C	P	Fri Oct 09 02:00:00 CEST 2009	06/11/09		
477356	LEMIE	TO	Bluetongue	C	P	Wed Aug 12 02:00:00 CEST 2009	17/09/09		
504486	SAN RAFFAELE CIMENA	TO	Bluetongue	C	P	Fri Sep 25 02:00:00 CEST 2009	26/10/09		

Example of integration with AT for diseases management: SNA & tracing tools

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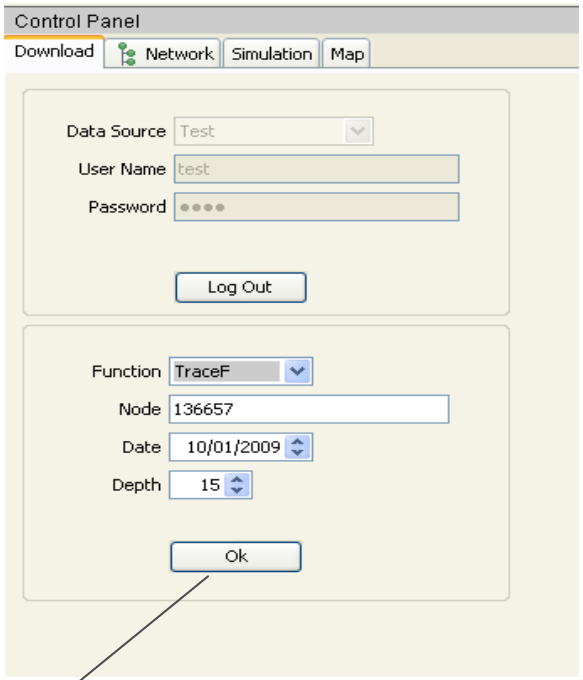
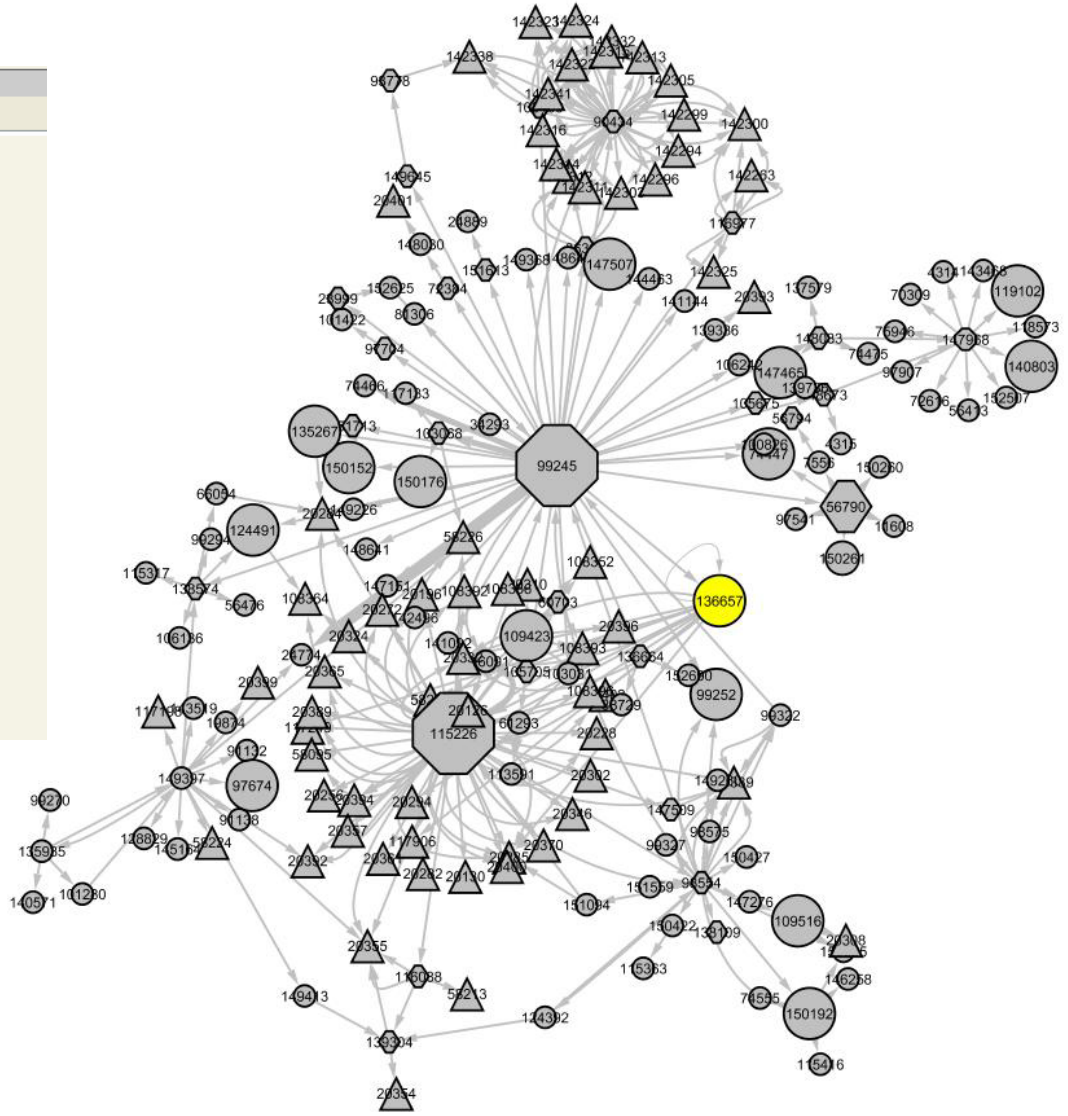
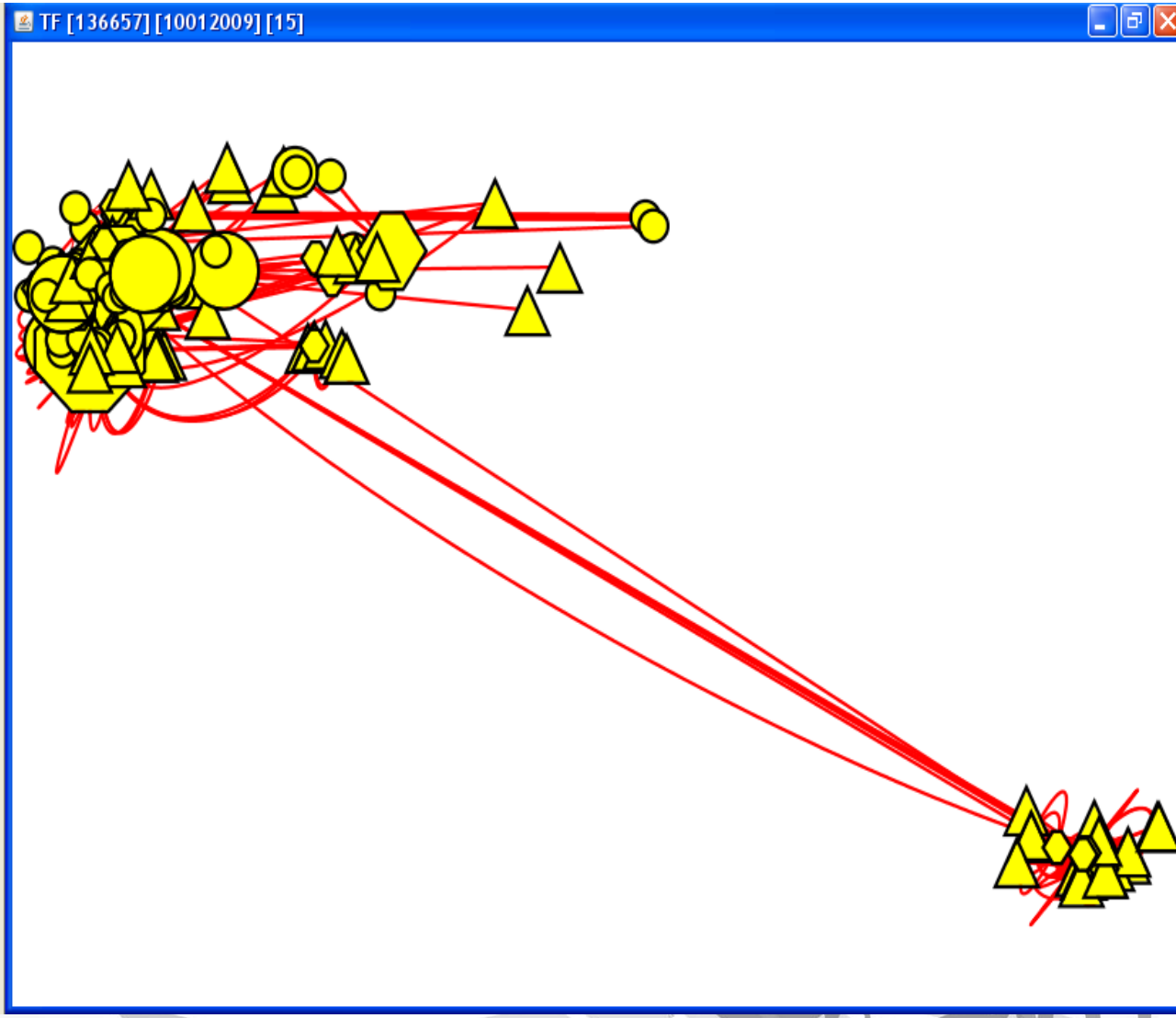




Example of integration with AT for diseases management: SNA & tracing tools



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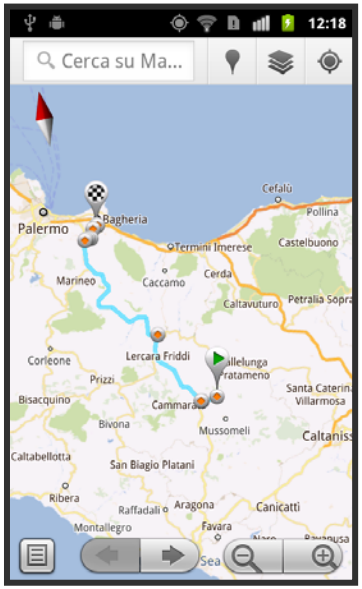
In-field applications

- Smartphones
- Tablets

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Acknowledge
FAO
IZSAM staff involved in SILABFA
Colleagues from Africa
Thank you