

Potential for the Blueprint/SARE in Western Africa

Accurate and up to date reporting

Terence Scott, Conrad Freuling

- Understand situation of rabies on different levels (local, country, regional, continental), Terence Scott
- Monitor progress towards elimination
- Measure efficacy of control measures
- Use of data for tools to :
 - Aid in understanding the diseases
 - Promote advocacy
 - Target specific areas
- Targeting high risk areas, Bernadette Abela-Ridder
- Breaking the transmission in high risk communities and corridors
- To be able to get good data for Africa : Epidemiological Bulletin, Andre Coetzer

Importance of **accurate** reporting

Terence Scott

- Notifiability does not mean effective surveillance system, Thomas Muller
- Audit epidemiological data for accuracy, Johann Kotze
- Problem of sample collection and shipmen, Gregorio Torres, Paola de Benedictis
- Need for SOPs (for rabies sample collection and shipmen), Juliet Kabajani
- Decentralization of laboratories, Johann Kotze

DRIT or not DRIT, is this the question ?

- Clinical diagnosis is not reliable, Lucille Blumberg
- Importance of laboratories/techniques
 - DRIT ? Juliet Kabajani
 - Lateral flow device ? Service Naissengar
 - FAT ? Others ? Claude Sabeta, Jacqueline Weyer
- **Lack of reagents** and equipment were the major constraints, Paola de Benedictis
- **Standardization** of techniques and reagents, Paola de Benedictis

Surveillance, what for ?

- **To inform physicians in charge of human PEP**
- Need for intersectorial collaboration (cf Case study)
- Need to develop access of populations to PEP (RIG ?)
- In case of failure of the system : How to manage human cases?

...Ownership.../go together

- Project ownership, the role of the champion and of the advisory/steering committee, Kevin Le Roux, Johann Kotze, Tennyson Williams
- Country ownership, Service Naissengar
- Dog ownership, responsibility
- Community participation, awareness
- Let people involved, Tennyson Williams
- Use of the Rabies day, Mathurin Tejiokem
- Take maximum use and improve efficiency of existing government infrastructure, Tennyson Williams
- Political engagement « The investment of the government is going up » ex : KZN
- Propose funding mechanisms, Austin Bitek

What more to be successful ?

- **Multisectorial partnership** with public and private partners, Isabelle Deschamps et Sophie Randoux
- Importance of animal welfare, Steve McIvar
- Explore opportunities with local social entrepreneurship organizations, Isabelle Deschamps et Sophie Randoux
- Involve African institutions, Tennyson Williams
- **Global organizations** being to influence governments and sponsorship, Kevin Le Roux
- Contribute to the empowerment of underprivileged local populations, Tennyson Williams
- How to deal with other priorities, Kevin Le Roux
- Let jealously create a snowball effect, Johann Kotze
- Define a goal for elimination Louis Nel

How to start to « go far »?

>> Start with small achievable areas, Johann Kotze

- SARE approach, define progressive objectives, Katinka de Balogh
- Pilot studies
 - Selection of district for pilot studies on a voluntary basis, development of new dog bite centers model , Mathurin Tejiokem
 - Scalable to other districts/regions/countries, Isabelle Deschamps and Sophie Randoux

>>Think big, start small, scale up, Bernadette Abela-Ridder

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And ...

● Be strategic, The right vaccine to the right dog,
Kevin Le Roux

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● Be strategic, The right vaccine to ...

« The story of the last dog »

By Kevin Le Roux

 Read the Blueprint!

by Louise Taylor, Thomas Muller et al.

Thank you for your attention

The stepwise approach in East Africa

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STEPWISE APPROACH



**Incremental progress, creating a framework to
control and eliminate rabies**

Stage 1 to Stage 2

- Dog vaccination initiated and PEP available in some parts of the country
- A functional, basic rabies surveillance system established



Dog vaccination campaigns

**Getting started,
and keeping it
simple**





Puppies can be safely vaccinated and should be vaccinated



Morters et al. (2015) Effective vaccination against rabies in puppies in rabies endemic regions. *Veterinary Record*.



Engaging with school children an important factor in successful campaigns

Insight

Intervention

Impact

Insight



Impact

Insight

Intervention

**Major insights and impacts come as we start to
implement interventions**



Learning from dog vaccinations in East Africa: dog ecology

- **Most dogs are accessible for rabies vaccination**
 - **Sufficient levels of vaccination coverage have been achieved in wide range of settings**
 - **Dogs in East Africa are owned**
 - **Reducing dog population density is not necessary for rabies control and elimination (and can make the situation worse)**

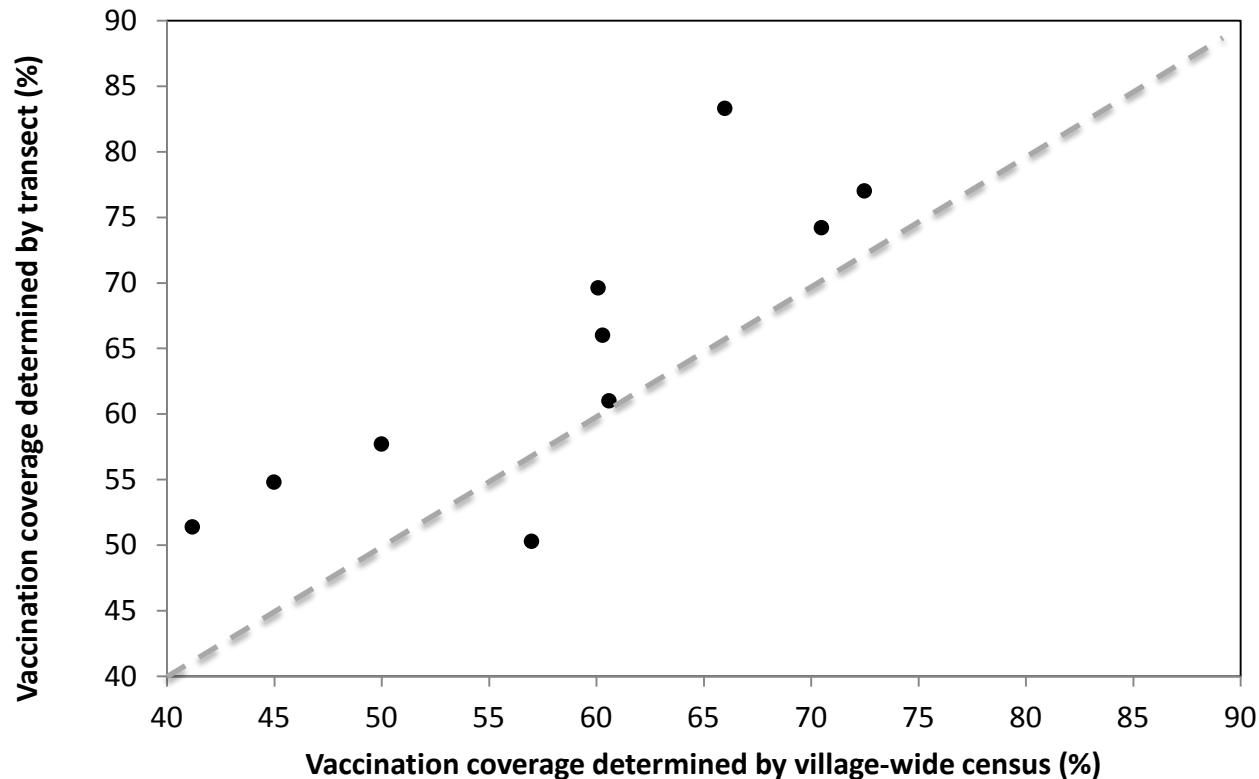
**There is almost always someone
who can handle the dog**



Marking dogs provides a way of estimating vaccination coverage



Village transect surveys: observation of marked dogs



Supported by MSD Animal Health

⇒ **Useful indicator of coverage**

=> If a large proportion of free-roaming dogs were ownerless 'strays', transect surveys would consistently under-estimate coverage (but in fact these surveys consistently over-estimated coverage)

Wildlife reservoirs:

Can the canine rabies virus be maintained in wildlife populations independently of domestic dogs?

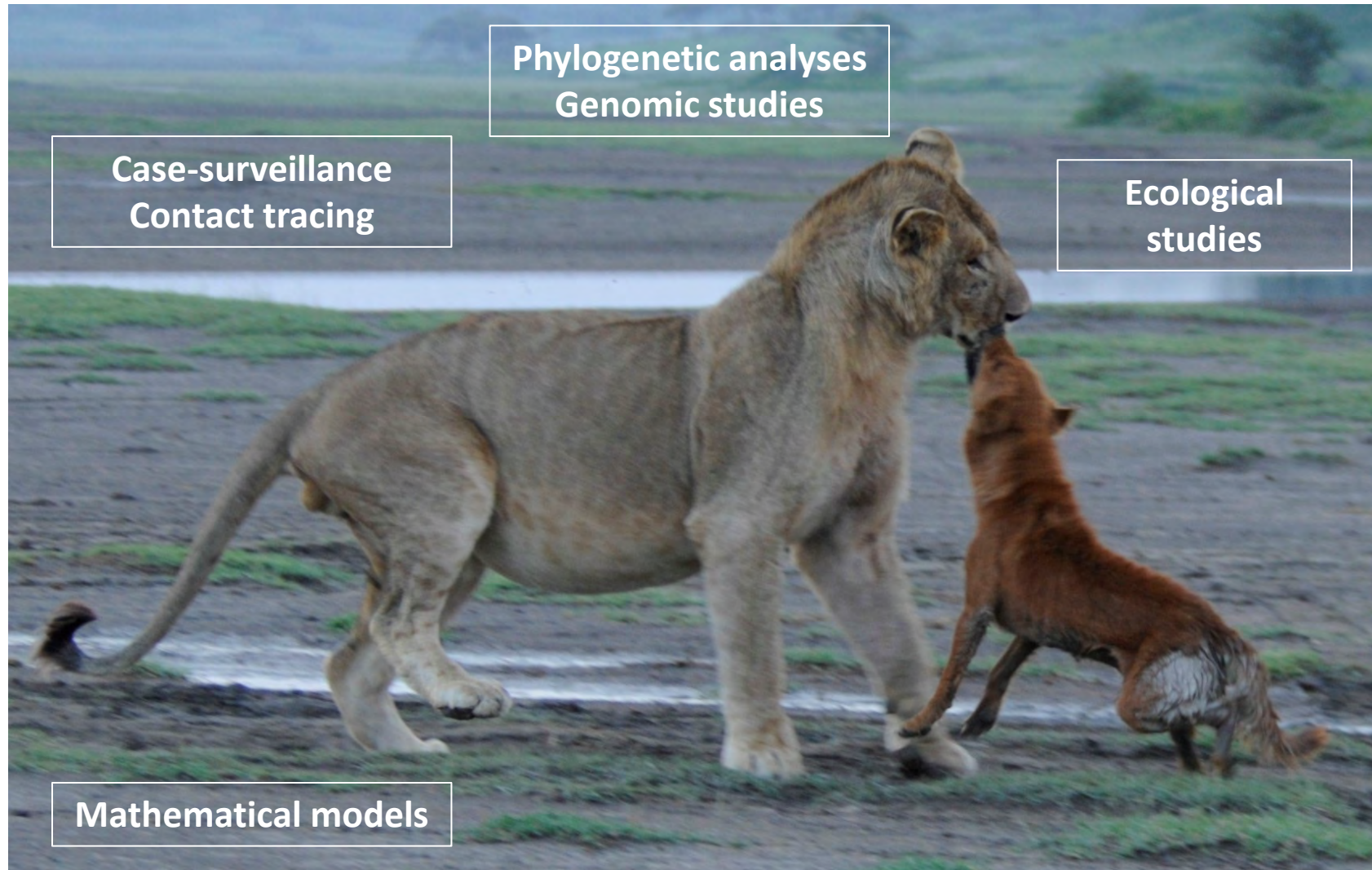
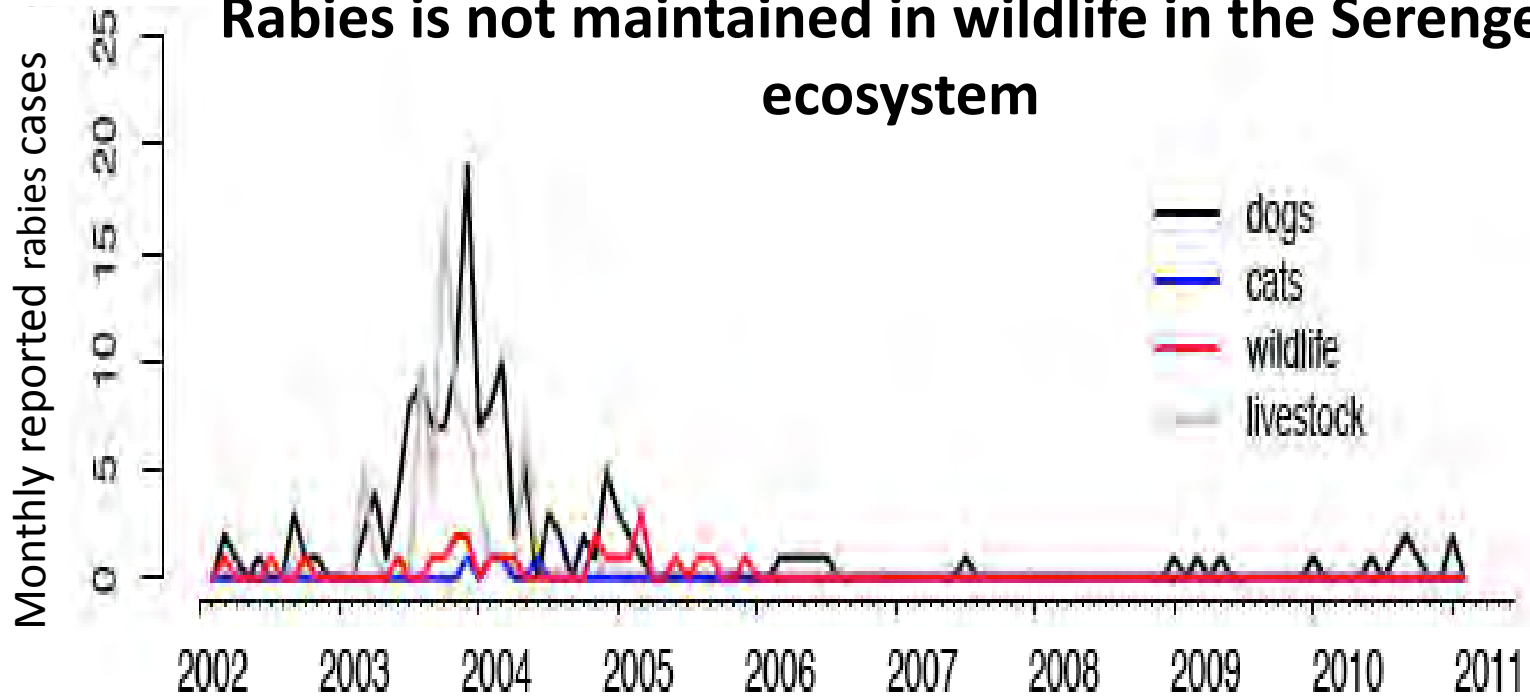


Photo: Ingela Jansson

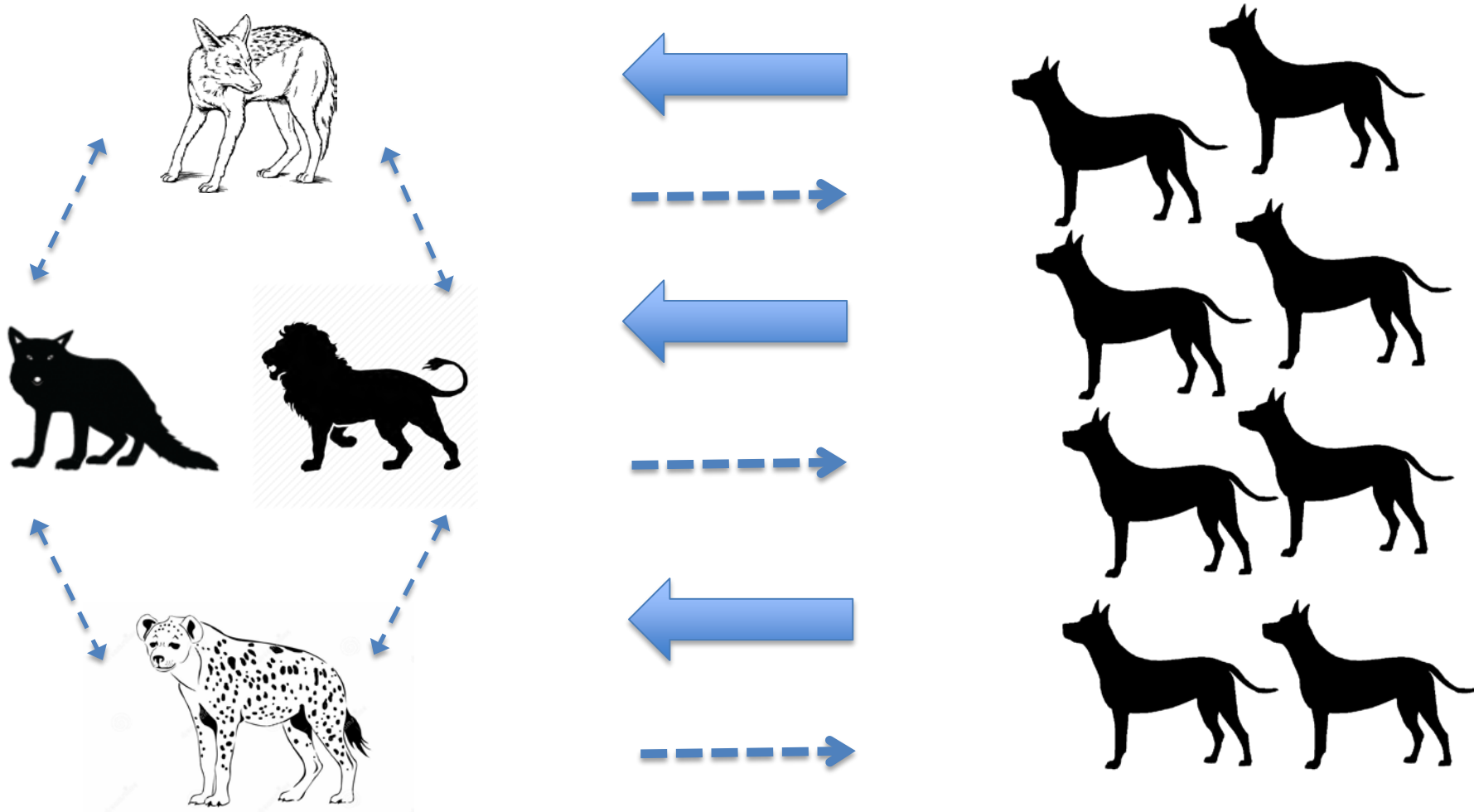
Rabies is not maintained in wildlife in the Serengeti ecosystem



Rabies cases in wildlife disappear when dog rabies is controlled through vaccination

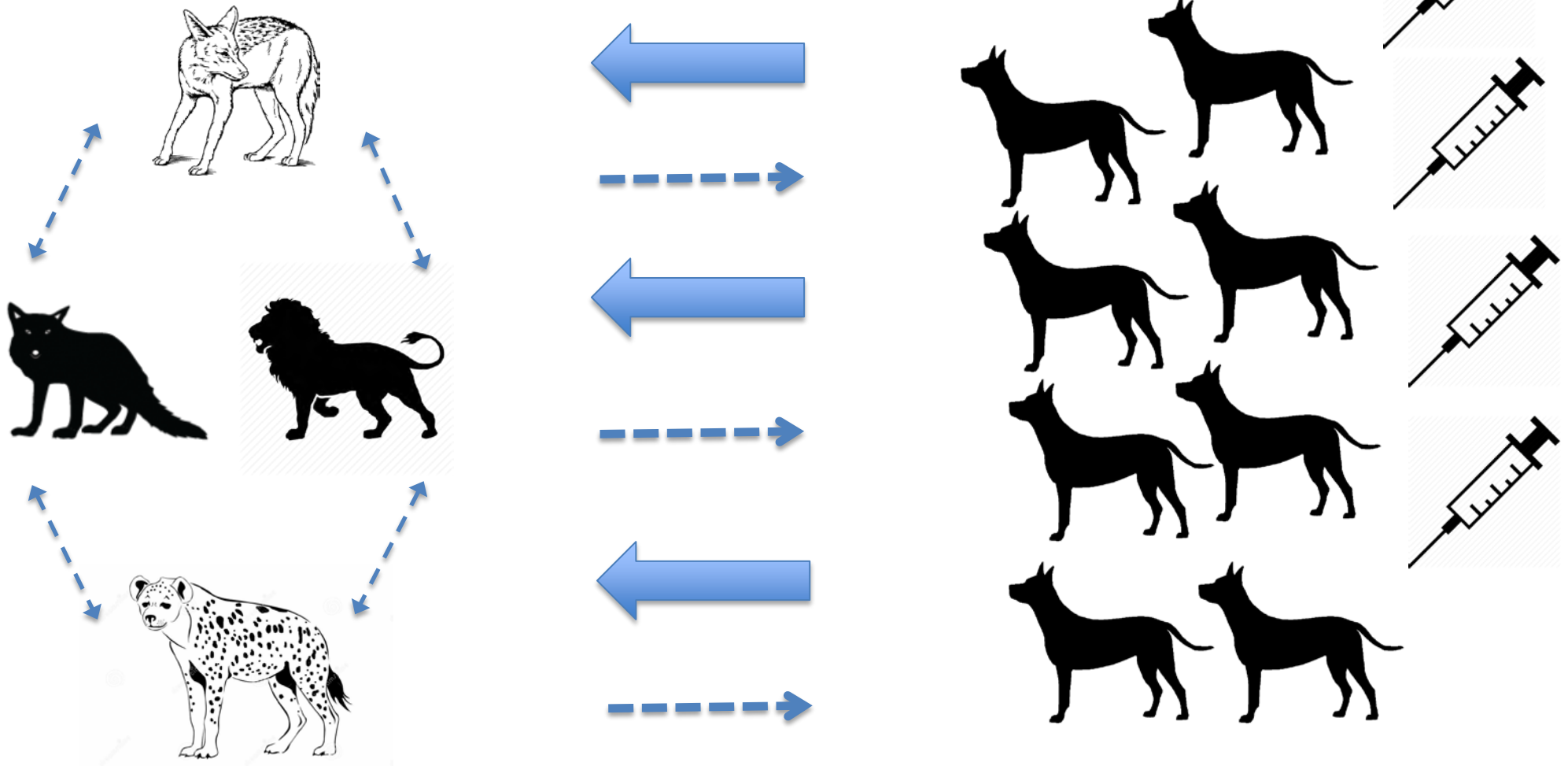
Wildlife populations previously endangered by rabies are now thriving

Many cases of rabies occur in wildlife
.....but there is no evidence that wildlife are
important maintenance hosts



Many cases of rabies occur in wildlife

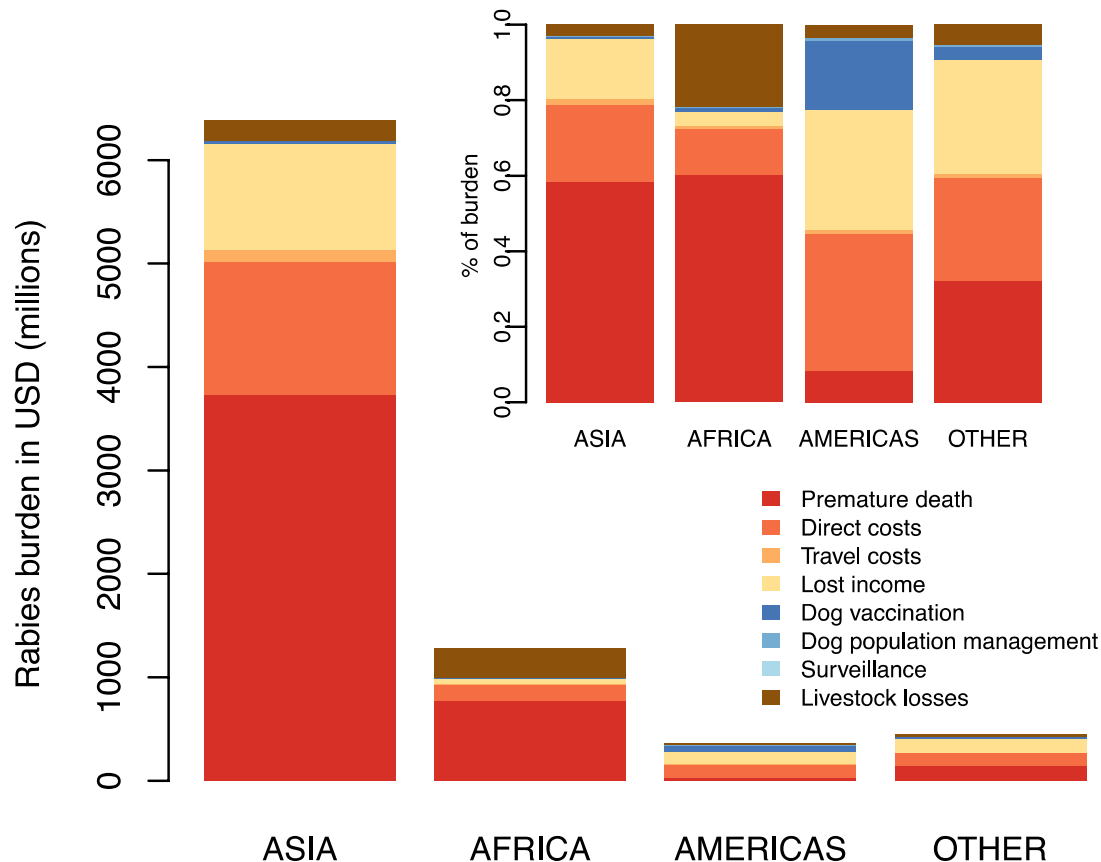
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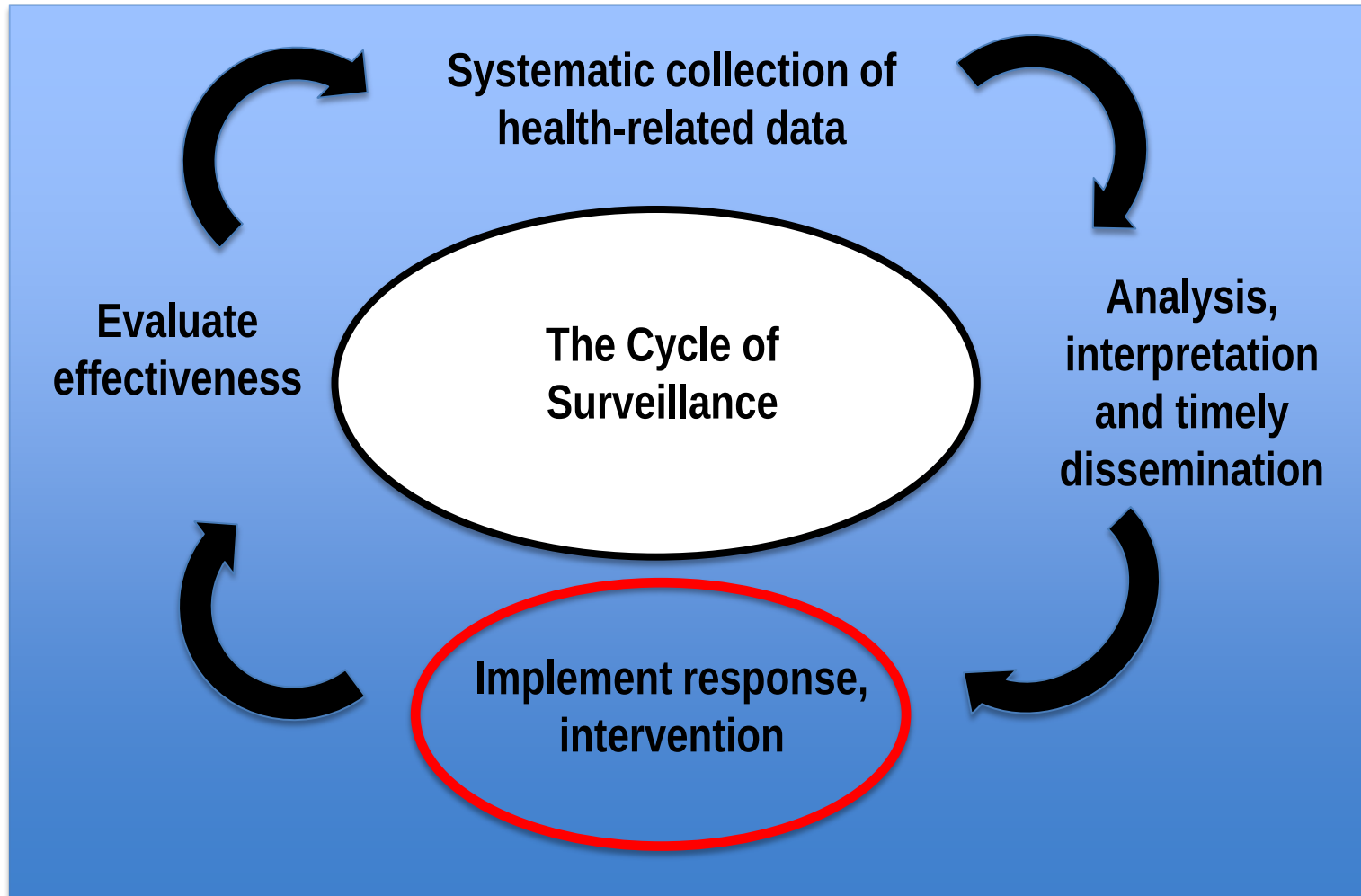


Livestock losses

Estimating the global burden of endemic canine rabies (Hampson et al. 2015)

- Quality of data poor but....
- Estimated losses in Africa ~ \$279 million per year due to dog-transmitted rabies in livestock



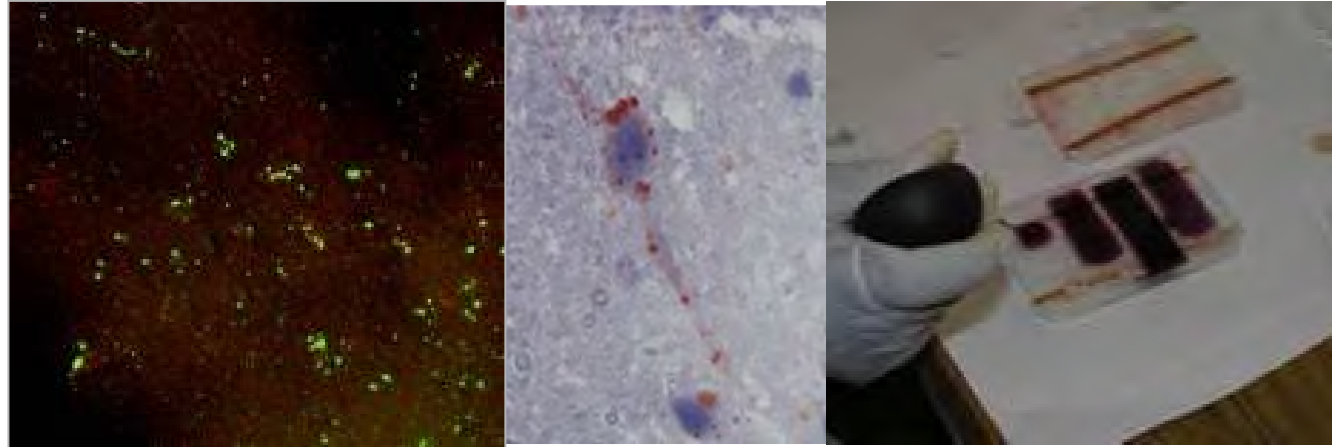


Response and intervention are critical components of the surveillance cycle

Engaging front-line workers in surveillance



Diagnostic capacity and diagnostic tools are essential



But a further critical element is collection of samples by field staff

EMPOWERMENT AND RESPONSE are essential



Reporting cases and submitting samples will be incentivised if linked with rabies control measures

Making most use of existing infrastructures

- Increasing emphasis on integrated strategies
- Community-directed interventions used for many diseases within the WHO NTD program



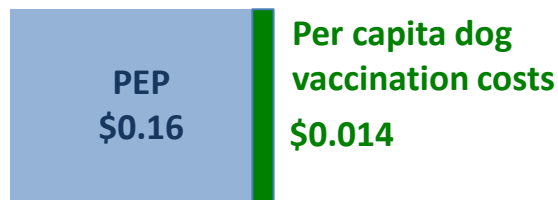
Dog vaccination campaigns save lives....and generate valuable data

- Effective dog vaccination campaigns will demonstrate success and feasibility
-and in the meantime will reduce human rabies deaths
-and can reduce human PEP (e.g. in Tanzania)
-and will build operational expertise and confidence
-and can catalyse more effective surveillance systems
-and can provide insights into dog population ecology
-and can improve understanding of rabies epidemiology
-and can encourage partnerships and funding

There is no reason for any further delay!

Per capita costs of rabies prevention

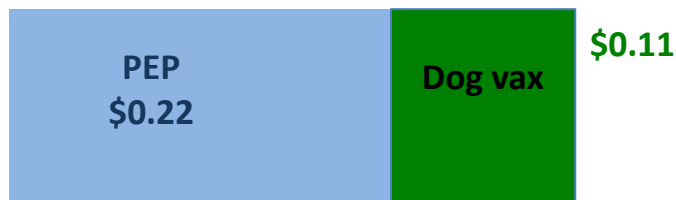
AFRICA - current



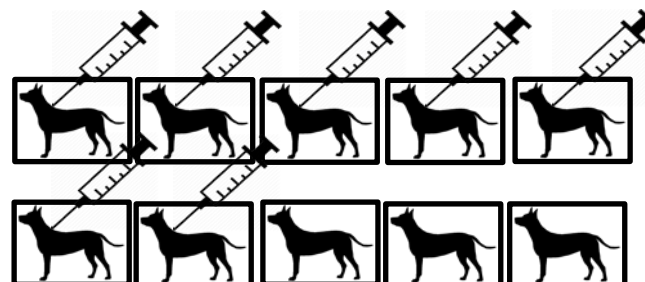
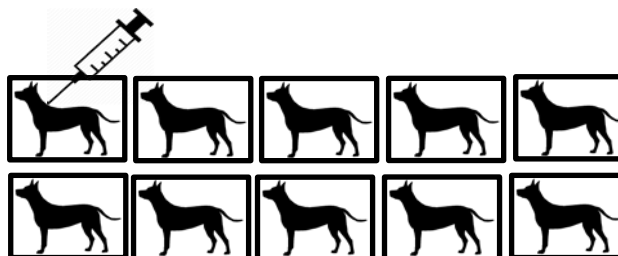
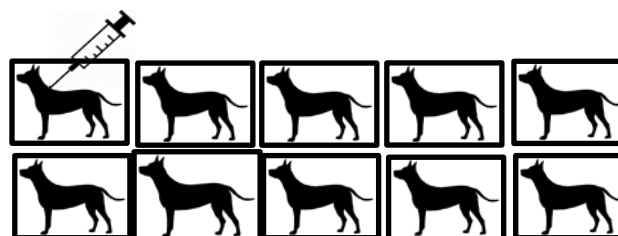
ASIA - current



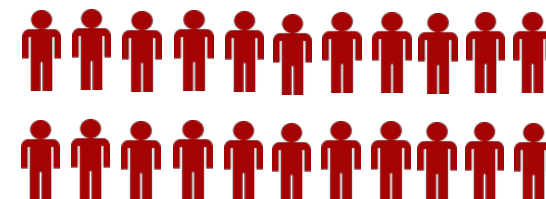
LATIN AMERICA - current



Dog vaccination coverage (%)



Human rabies deaths per million population



Investments in mass dog vaccination provide a cost-effective approach to human rabies prevention

**We have excellent tools and
excellent partners**



**BILL & MELINDA
GATES foundation**

**Partners will join you if you can
demonstrate commitment and success**

We can go far togetherand not too slowly!



Merci beaucoup!