



# Important diseases and pathogens in wild animals

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# A Ray of Hope for addressing our global ch

- Animals as Sentinels
- Antimicrobial Resistance
- Bio-Diversity /Conservation Medicine
- Climate Change
- Comparative Biology
- Disaster Preparedness / Relief
- Economics/Complex Systems, Civil Society
- Food / Water Safety / Security
- Human – Animal
- Non-Communicable Diseases
- Plant & Soil Health
- Vector-borne Diseases
- Welfare / Well-being of animals, humans
- Zoonotic Diseases

# Why are we interested in diseases of wild animals?

- Diseases affecting only wildlife
- Diseases transmissible between wildlife and domestic animals
- Diseases transmissible between wildlife and humans (zoonoses)

# Different types of wildlife diseases

- Wildlife can be symptomless carrier/ reservoir for diseases
- Wildlife can be involved in disease outbreaks  
wildlife/domestic animals
- Epizootic outbreaks of diseases in wildlife

# Diseases of wildlife

Marburg

Rabies

EBOLA

Salmonellosis

Nipah

Tuberculosis

Brucellosis

MERS

Malaria

Leptospirosis

Dengue

African swine fever

Anthrax

Tularemia

Mange

CWD

SARS

Lyme

Avian influenza

Yellow fever

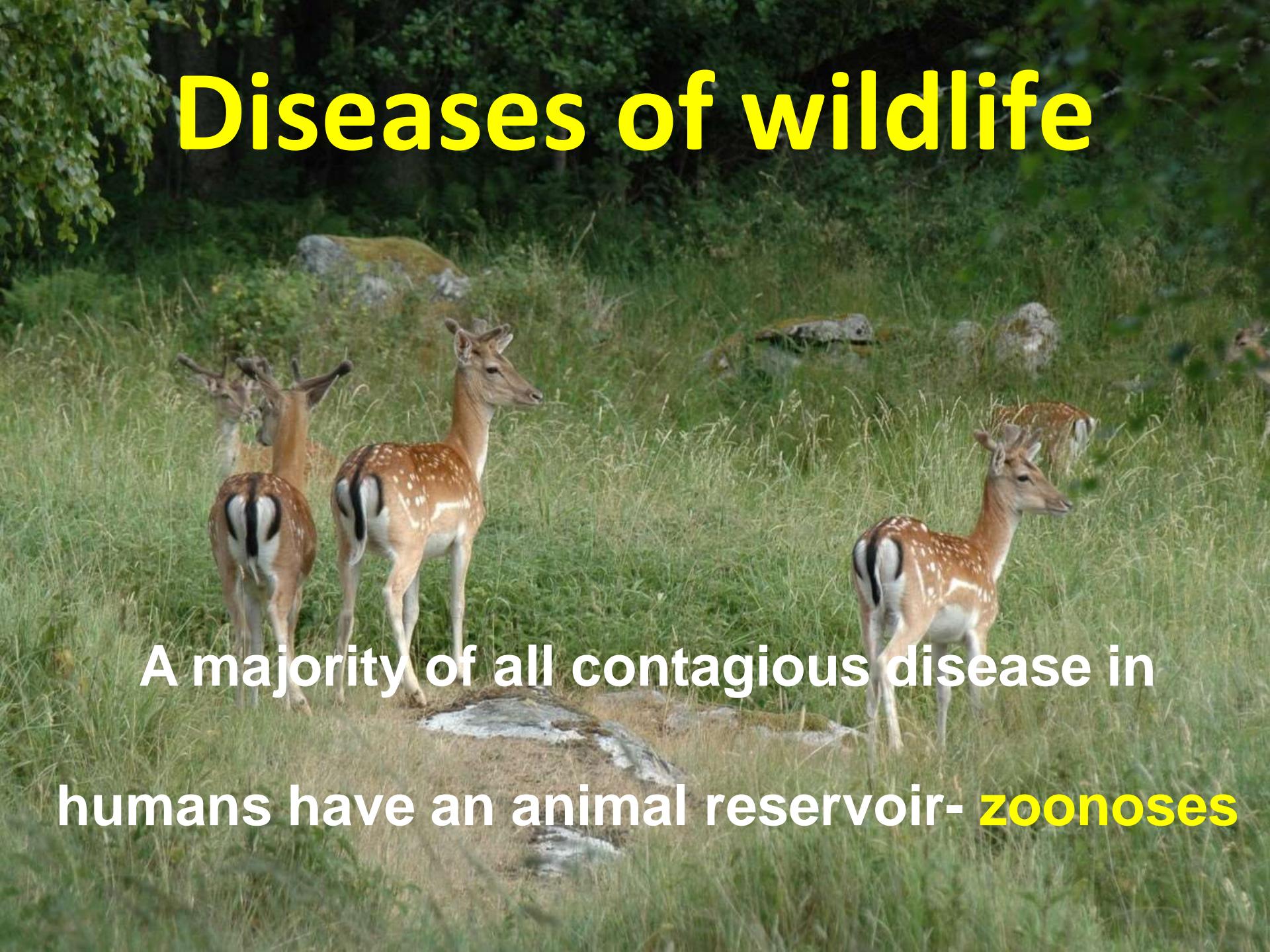
Bluetongue

Bilharzia

CWD

SARS

# Diseases of wildlife

A photograph of several deer in a natural habitat. In the foreground, two deer are facing away from the camera, showing their tails with prominent black spots. Another deer is facing right. The background is a lush green field with several large, mossy rocks and a dense line of trees at the top.

A majority of all contagious disease in  
humans have an animal reservoir- **zoonoses**

# Diseases of wildlife

Affect wild animal populations

Threat to biological diversity

Transmission wildlife  domestic animals

Directly transmitted zoonoses

Food borne zoonoses

# Managing diseases in wild animals?



Why?  
Surveillance  
Possible?  
Which diseases?  
How?  
Does it matter?



# Why manage wildlife diseases?

- Diseases may have an impact on population size
- Diseases may impact biological diversity
- Wildlife can be a reservoir for domestic animal diseases
- To reduce risk for transmission to domestic animals
- To reduce risk for direct transmission to humans
- Food safety game meat
- To reduce density and by that mortality

# Manage wildlife diseases

## Which diseases?

- Rabies
- Classical Swine Fever
- Tuberculosis
- Anthrax
- Footh and Mouth Disease
- Avian Cholera
- Botulism
- Duck Plague

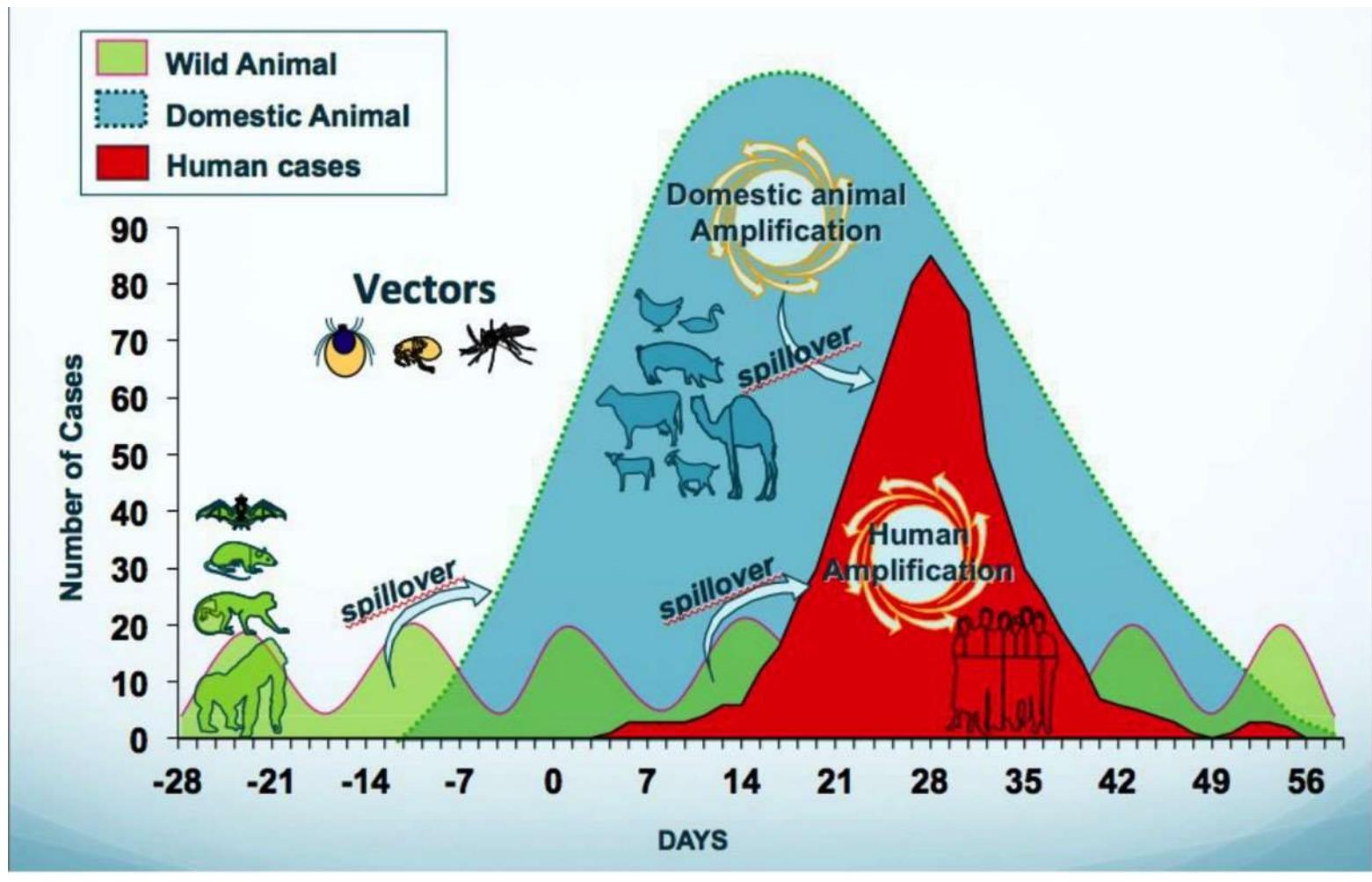


# Manage wildlife diseases

How?

- Reduce animal population
- Restrict movements
- Restrict hunting
- Stop contacts domestic animals - wildlife
- Vaccination

# One Health in Action



Source: Karesh et al. 2012. The Lancet & WHO

# OIE list Notifiable diseases

- **93 diseases**
- Cattle
- Avian
- Sheep and goats
- Swine
- Hares/rabbits
- Horses
- Multiple species

## Domestic

28 diseases

13 diseases

11 diseases

6 diseases

3 diseases

11 diseases

39 diseases

## Wildlife

19 diseases

All 13

7 diseases

3 diseases

All 3

2 diseases?

27 diseases

A photograph of a herd of antelopes, likely impalas, in a natural savanna-like environment. They are brown with white markings on their faces and legs. Some have small red birds, possibly oxpeckers, on their backs. The background shows green trees and bushes.

# OIE list Notifiable diseases

## Wildlife list 52 diseases

Some infecting only wildlife,

Some infecting both wildlife and domestic animals

A total of 126 diseases of importance

# Important Diseases of wildlife

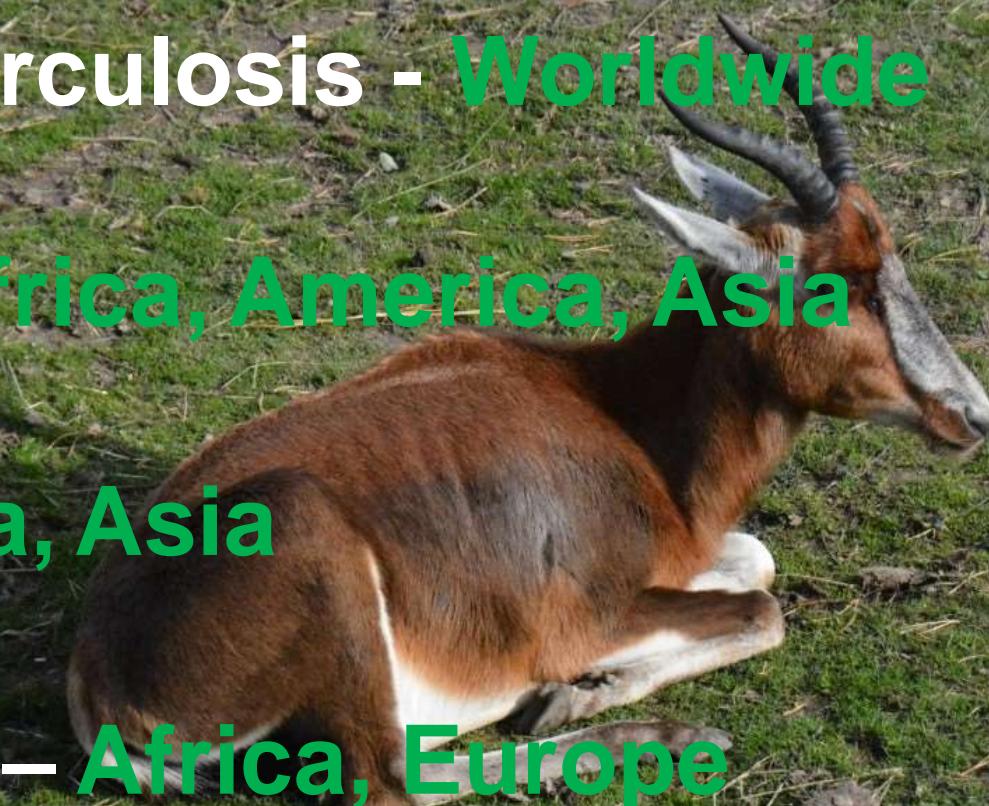
## Ungulates

Bovine tuberculosis - Worldwide

Anthrax – Africa, America, Asia

FMD – Africa, Asia

Bluetongue – Africa, Europe



# Important Diseases of wildlife

## Carnivores

Rabies – Worldwide

Canine distemper – Worldwide

Bovine tuberculosis - Worldwide

Echinococcus - Worldwide

# Important Diseases of wildlife

## Wild boar

Afriach Swine fever – Europe

Classial Swine Fever – Asia, Europe

Aujeskys diseases – America, Asia

Bovine tuberculosis - Europe



Live animal markets

SARS, COVID-19  
Avian Influenza



HIV  
Ebola



Wildlife hunting

### Emerging zoonotic disease



Intensive wildlife farming

COVID-19  
Rabies  
Avian influenza

Hendra  
Nipah  
Avian Influenza



Domestic animals

Thank you for your attention



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