Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs DEA
Institute of Virology and Immunoprophylaxis IVI

From the field to the laboratory

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Everything is a risk nowadays…

250 000 Killer-Enten im Anflug

Reiherenten im Flug: Bringen uns diese Zugvögel die Vogelgrippe?


ca. 250 000
500 km
Seit Dezember 2003
Virus nur in Vögeln gefunden
Menschen und Tiere am Virus gestorben
Ausbrüche seit April 2005
Ural
RUSSLAND
KASACHSTAN
MONGOLEI
CHINA
JAPAN
SÜD-KOREA
TAIWAN
INDIEN
THAILAND
LAOS
VIETNAM
KAMBODSCHA
MALAYSIA
INDONESIEN
Die liebsten Winterplätze der Enten
Basel
KREUZLINGEN
ERMATINGEN
Zürich
St. Gallen
Biel
Luzern
Bern
YVERDON
Chur
Interlaken
Lausanne
St. Moritz
MONTREUX
Sitten
Locarno
GENF

Overview

- First responders
- Disease awareness
- Risk aspects

First responder

- Livestock owner

⇩

Field veterinarian

  - Disease awareness of
    - livestock owner
    - Field vet

Disease awareness

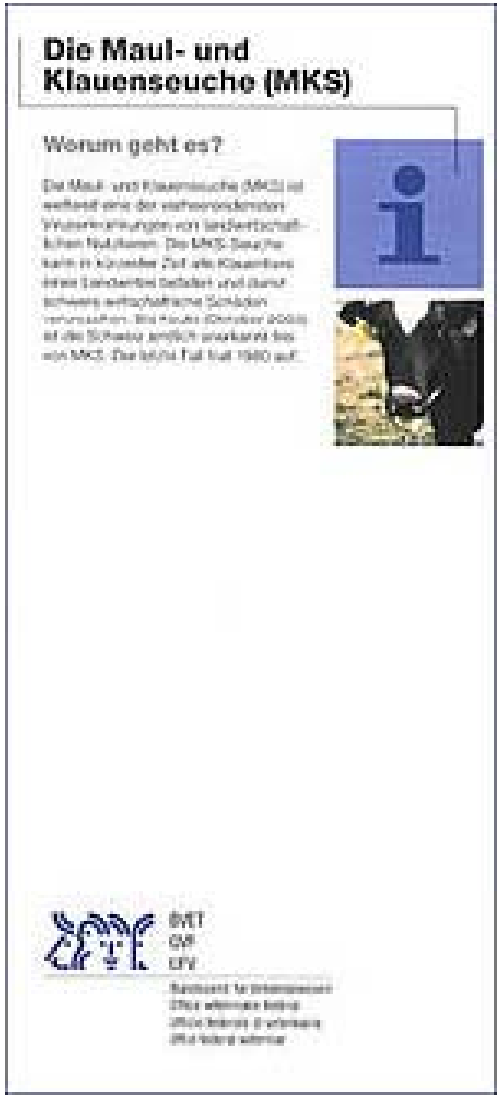
- Depends strongly on the disease present
  - within the country
  - In countries with borders to CH
  - In Europe

	FMD	BT
Farmer	+	++++
Field vet	++	++++
Last case CH	1980	2006-2009

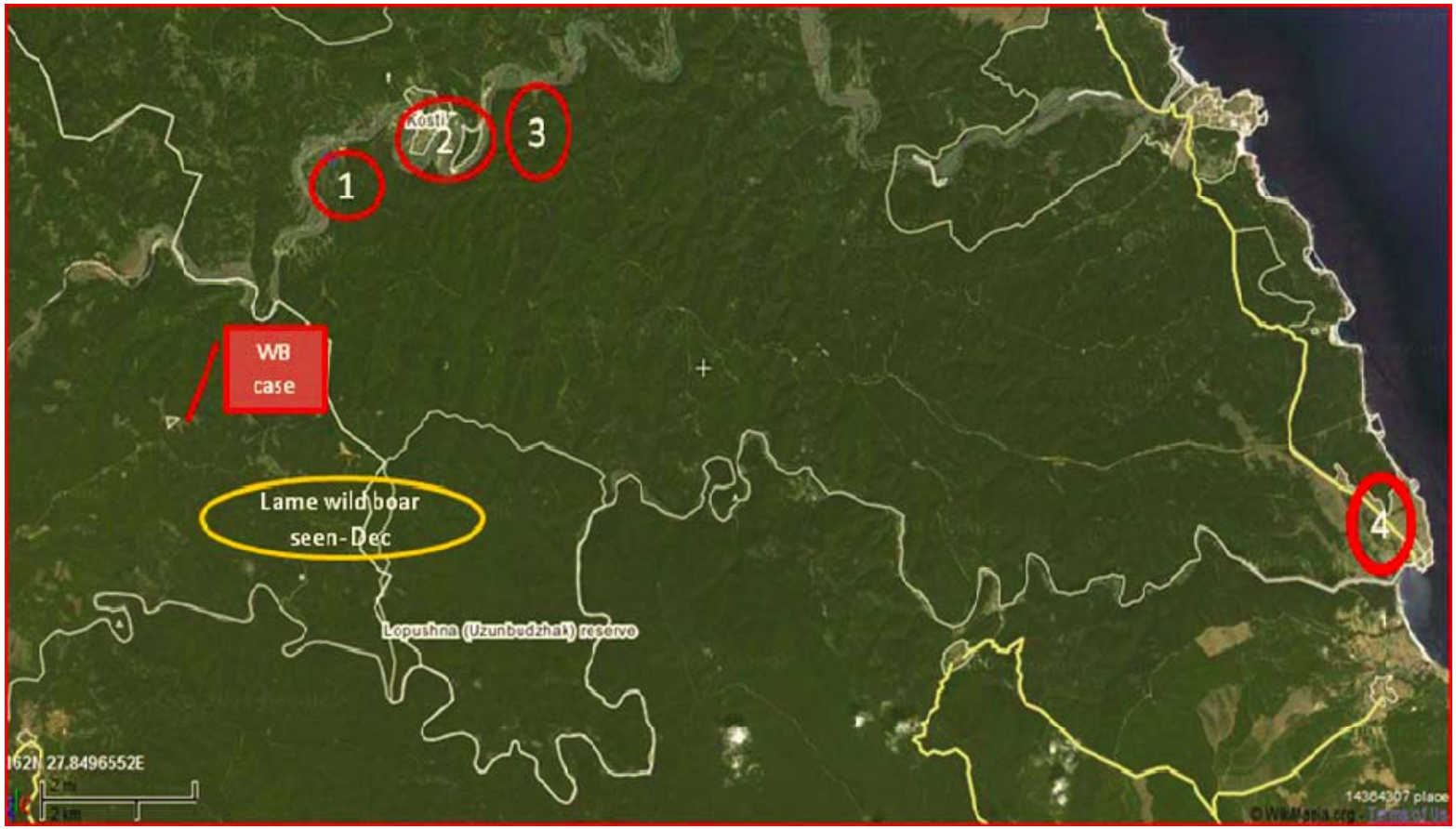
Indicator(s): Suspect cases submitted to IVI
Media Interest
Livestock owners asking questions

Improvement of disease awareness

- Information leaflets
- Teaching at the 2 vet schools
- Media (eg „farmers weekly“)
- On going: WNF, AHS
    - Effectiveness?



FMD in Bulgaria, January 2011

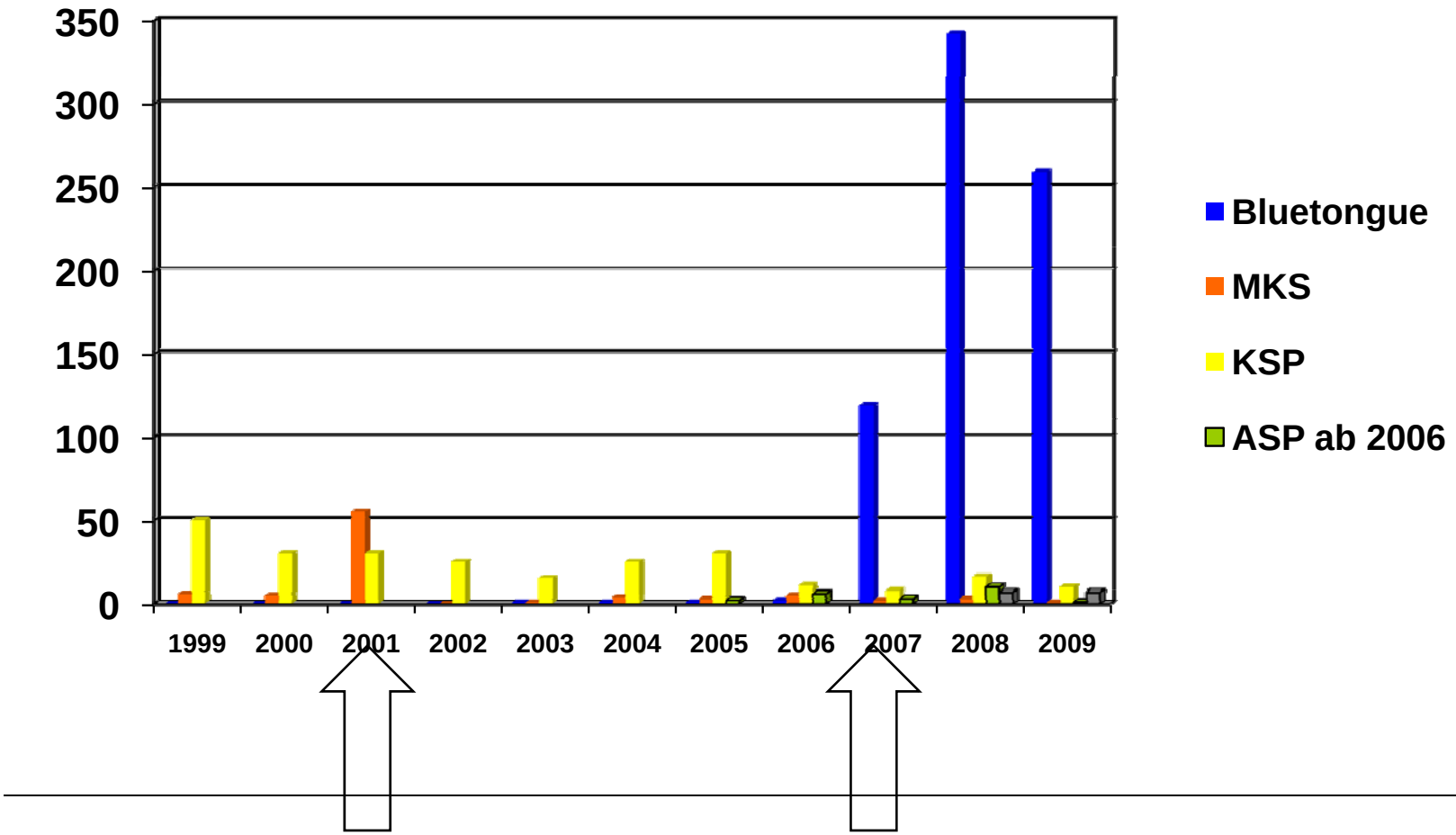



15.01.2011

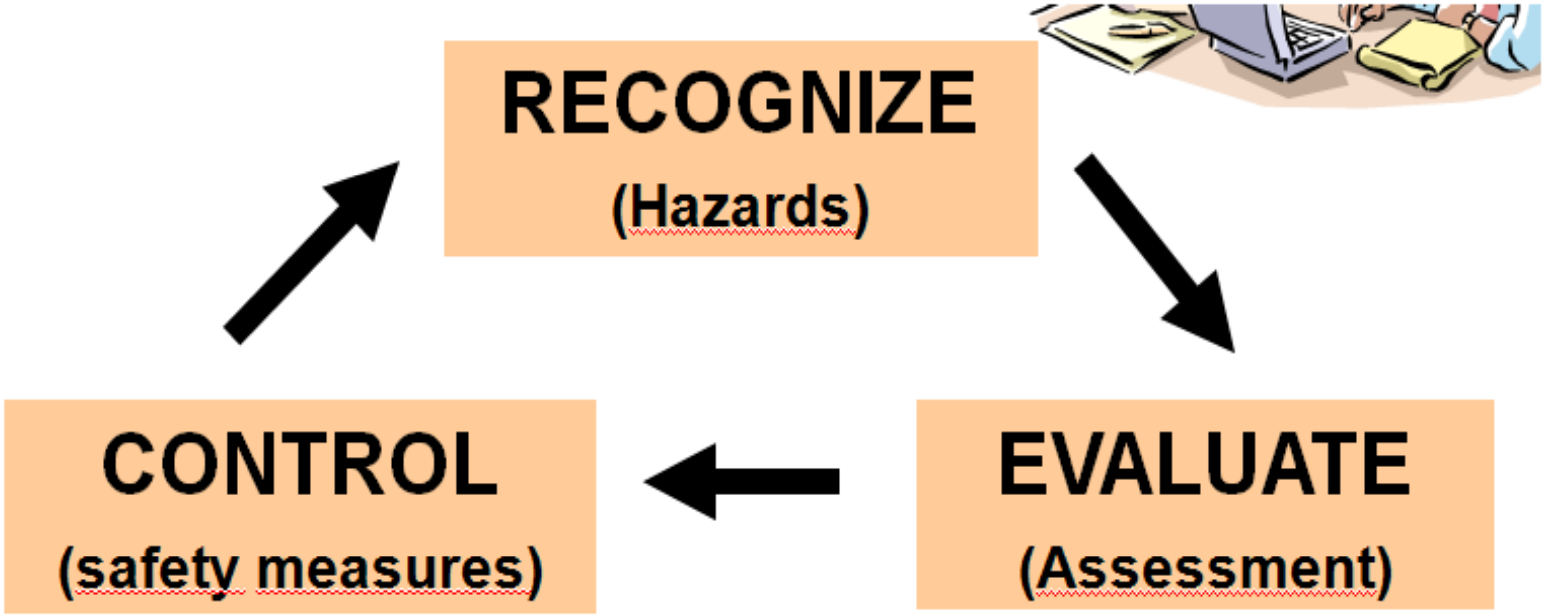

Wire-net
Rezovo
Google


UK 2001

Suspect cases submitted to IVI



Risk



likelihood x consequences

Two risk aspects

- RA in the field
- RA in the laboratory

A = Assessment

What is a hazard?

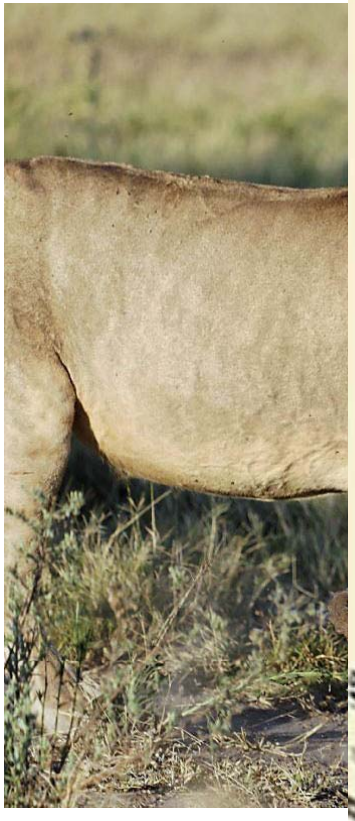
Hazard
is a source that has the potential for causing harm

A = Assessment

What is a risk? Is hazard = risk?

Hazard
is not a risk without a specific environment or situation

A =



ıood* and the consequences** of an undesirable event related to a specific hazard

RA in the field

1. **Hazard identification**

- Examination of the animal (hazards: animals bites, kicks, exposure to infectious agents, noise etc)
- Use of sharps
- Use of anesthetics
- Culling of animals
- Taking samples
- Packaging of the samples
- Transport of the samples
- Disinfection of premises (chemical hazards)

- Risk for the people involved, risk for the environment


B Schildger, Dählhölzli


2
2


K1
TMF
CREUTER WIL
SG 47039
Eschler WIL SG
Fahrzeugbau AG

How are the samples
Arriving in your lab?

RA in the field

2. Assessment of hazards

- What is the likelihood of exposure and what are the consequences?
  - Infection
  - Needle stick
  - Exposure to chemicals etc.
  - Direct exposure to the pathogen and the infected animal in the field
- Depending on the animal species and the disease the likelihood of exposure is higher and also the consequences
- Work with PPE cumbersome and not all PPE used in the laboratory can be used in the field

Turkey, January 2011

D Hadorn, BVET

RA in the field

Mitigation measures:

- Personal protective equipment
- Proper technical equipment eg. for culling

Training of veterinarians

mandatory courses for district veterinarians

(FMD) Outbreak simulation exercise 2011

Training program since 11/2010

- Entry to the infected premise (how to gown, where to put the material, how to set up the biosafety barriers between contaminated and non-contaminated zones)

- Exit of the infected premise (how to safely remove PPE, how to bring out samples, how to transfer material and dead animals to the non-contaminated area, disinfection and decontamination etc.)

- Sampling- packaging– transport

BVET
OVF
UFV

Bundesamt für Veterinärwesen
Office vétérinaire fédéral
Ufficio federale di veterinaria
Uffizi federal veterinar

Nosos

Simulation FA 03
MKS Simulation 03

Ici se déroule un exercice du service vétérinaire suisse

Hier findet eine Übung des schweizerischen Veterinärdienstes statt

RA in the laboratory

Here we are all good at!

In the laboratory the following elements need to be considered:

- ⇨ Type of samples (pathogen load, organs, known or unknown pathogen etc.)
- ⇨ Type of activity (homogenization, use of sharps, use of robots, aerosols etc.)
- ⇨ Safety measures

RA in the laboratory

1. **Hazard identification**

- Unknown samples
- Unpacking of the samples
- Aliquoting of samples
- Transfer – transport of samples within the lab
- Analysis of samples with different methods

RA in the laboratory

2. Assessment of hazards

- What is the likelihood of exposure and what are the consequences?
    - o Infection
    - o Needle stick
    - o Exposure to aerosols due to the methods etc.
- No direct contact to animals, laboratory equipment, contact to samples.
- Specific PPE available

RA in the laboratory

4. Mitigation measures:

- Personal protective equipment
- Proper technical equipment eg. for culling
- Training of laboratory staff
- Exercise

Likelihood of exposure

Summary

- Open for discussion