University of

# Veterinarians in animal disease control and added value of a One Health framework?

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SGBE-Seminar für biomedizinische Ethik

18. January 2024, Bigorio (TI)

One Health und Ethik

"... as a general rule, veterinarians are ill-prepared to confront ethical debates. [...] Veterinarians may be frustrated by philosophical questions which are not amenable to empiric resolution."

Arkow (1998) Application of ethics to animal welfare. Applied Animal Behaviour Science 59; 193-200

#### **Added values**

Claim 1: Vets to gain access to ethical reasoning in their professional life.

Claim 2: Existing ethical conflicts can be discussed in a transdisciplinary way.

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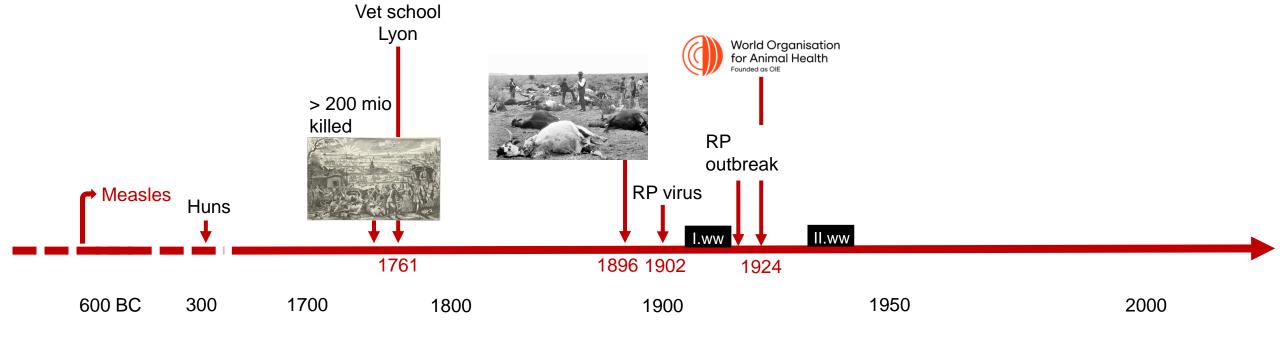
God's Punishment on the Netherlands through the Cattle Plague, 1745 by Jan Smit



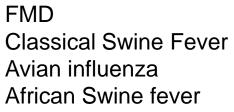
#### **Rinderpest in South Africa 1896**

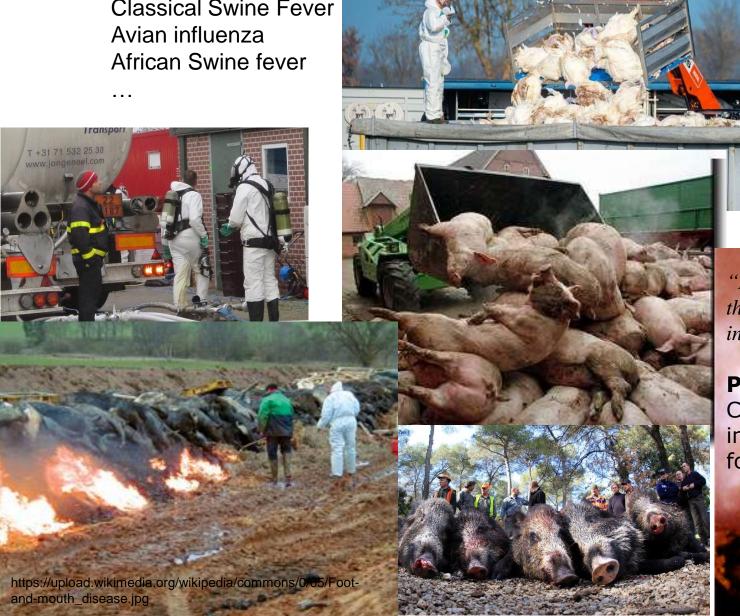


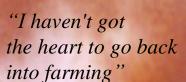
- 1888, rinderpest was introduced into Abyssinia by the Italian army
- 80-90 % of cattle died
- Bush Tse-tse flies sleeping sickness
- Famine: 1/3 of Ethiopians, 2/3 Massai died











#### Philip Board,

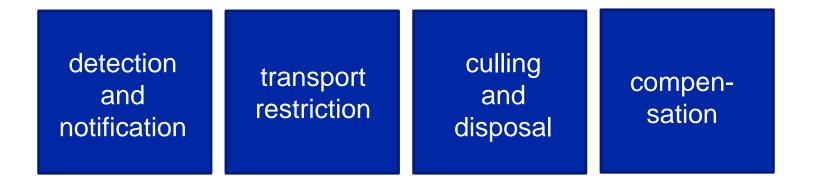
Clarence Farm near Axminster in Devon, UK, after the foot-and-mouth outbreak (2001)

## Foot-and-mouth disease, Classical Swine Fever and Avian Influenza

FMD	(1954-1967)	180 outbreaks
FMD	(2001)	4.5 Mio culled infected/suspected, 2.5 Mio culled welfare

CSF	(1997-98)	pre-emptive culling 1.9 Mio animals, > 2000 farms, only 425 infected, culling due to welfare 8.5 Mio animals
CSF	(2006)	culling 94.000 animals, only 3/188 farms positive

Al	(1959-89)	23 Mio
Al	(1999-2004)	> 200 Mio
Al	(2021-22)	22 Mio in France



successful strategy

"It is time to close the book on infectious diseases, and declare the war against pestilence won." Long attributed to the United States Surgeon General, Dr. William H. Stewart (1965-1969).

Spellberg B, Taylor-Blake B.

On the exoneration of Dr. William H. Stewart: debunking an urban legend.

Infect Dis Poverty. 2013 doi: 10.1186/2049-9957-2-3

detection and notification transport restriction culling and disposal compensation

successful strategy

"The striking successes achieved with antibiotics, together with widespread application of vaccines...made many physicians and the public believe that infectious diseases were retreating and would in time be fully conquered... it had become commonplace to suggest that infectious diseases were about to become a thing of the past and that chronic, noninfectious diseases should be our major priorities".

Morse S. In: AIDS: The Making of a Chronic Diseaseed. Fee F, editor. Berkeley: University of California Press; 1992. AIDS and Beyond: Defining the Rules for Viral Traffic; p. 41.

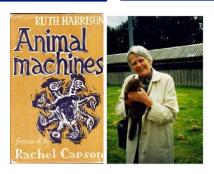
detection and notification

transport restriction

culling and disposal

compensation

«successful» strategy



Ruth Harrison, 1964

detection and and notification transport restriction culling and disposal compensation

- «successful» strategy
- prohibition of vaccination 1990s (FMD, AI, CSF)
- WTO-SPS agreement (1995), freedom of disease
- FMD 2001
- changes in societal attitude towards animals

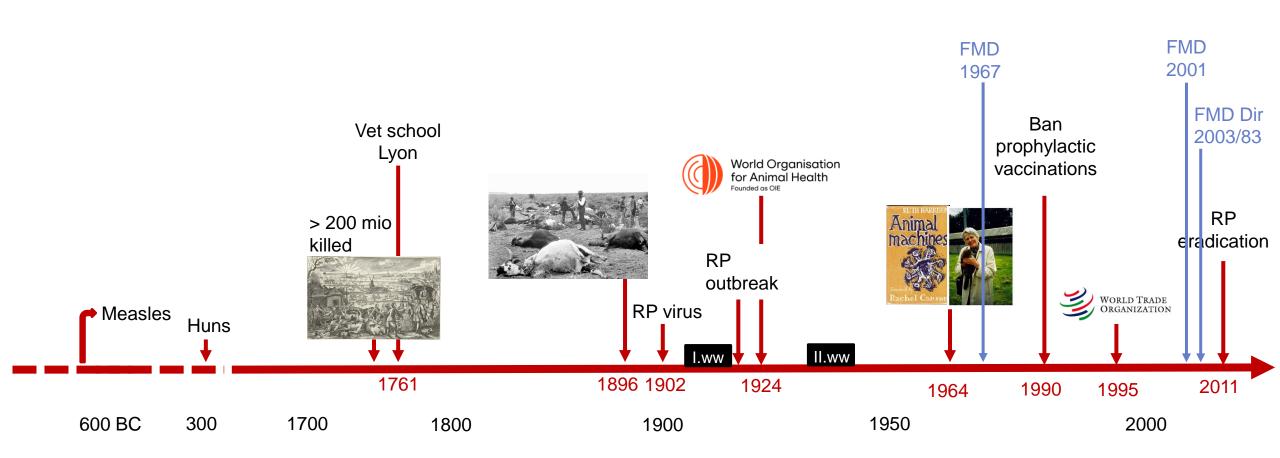
FMD crisis 2001 in NL "the ignorance of the societal function of animals was the cause of the crisis" van der Zijpp et al. 2004

#### ABIGAIL WOODS

WHY SLAUGHTER? THE CULTURAL DIMENSIONS OF BRITAIN'S FOOT AND MOUTH DISEASE CONTROL POLICY, 1892–2001

Journal of Agricultural and Environmental Ethics 17: 341–362, 2004.

To its supporters, slaughter was far more than a method of disease control; it acted also as a moralizing and civilizing force, an indicator of veterinary ability and a "virility symbol" of British international leadership. This "cultural" rationale for FMD control by slaughter declined during the late 20th century and was wholly undermined by the 2001 epidemic, when extensive culling failed to convey the intended image of an organized, enlightened Britain.



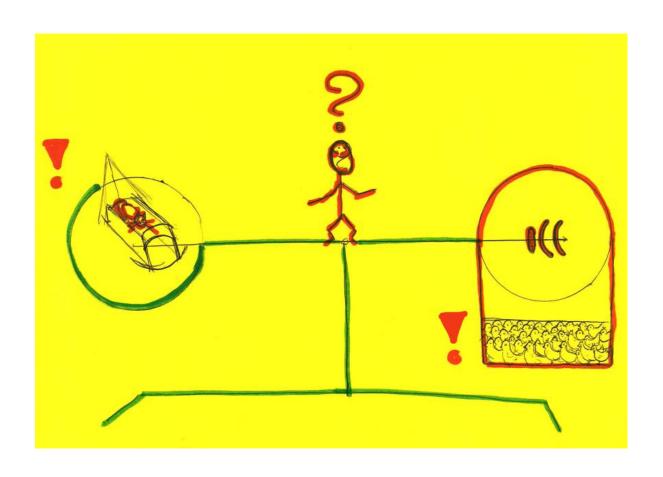
#### FMD directive 2003/85/EC

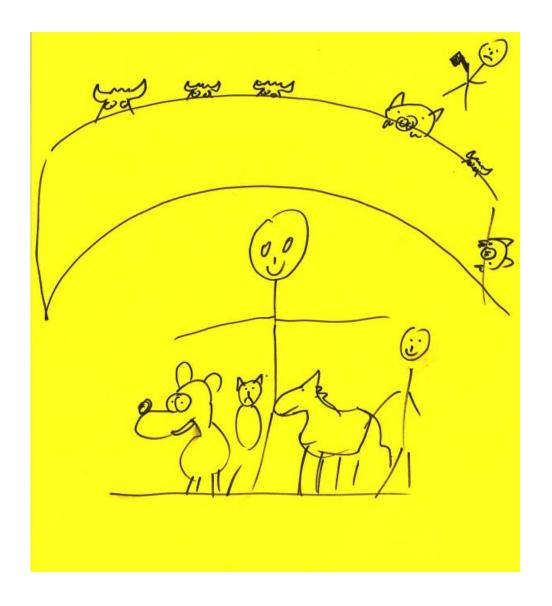
(1) One of the Community's tasks in the veterinary field is to improve the state of health of livestock, thereby increasing the profitability of livestock farming and facilitating trade in animals and animal products. At the same time the Community is also a Community of values, and its policies to combat animal diseases must not be based purely on commercial interests but must also take genuine account of ethical principles.

## **Conflicting aims: Veterinarian's Oath**

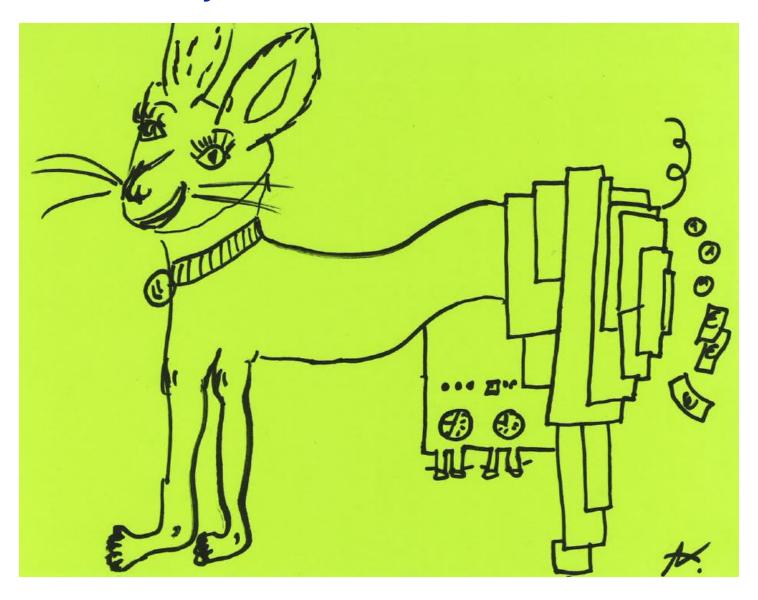
"Being admitted to the profession of veterinary medicine, I solemnly swear to use my scientific knowledge and skills for the benefit of society through the protection of animal health and welfare, the prevention and relief of animal suffering, the conservation of animal resources, the promotion of public health, and the advancement of medical knowledge..." (AVMA, www.avma.org)

# **Perspectives of official veterinarians**





# How do you think society looks at animals?



#### Official veterinarians in animal disease control

#### Similarities and patterns

- Culling personnel in protective suits
- Mass killing
- Criticism focused on the killing of healthy, uninfected animals
- Logistical problems due to time pressure

#### Relevant for official veterinarians

- Decisions have to be made under time pressure
- Official veterinarians must implement/accompany ordered mass culls
- Unclear data or data and opinions are later revised
- Pressure and resistance from the population
- Complexity and lack of knowledge about current animal husbandry
- Existing problems are exacerbated

#### Responsibility

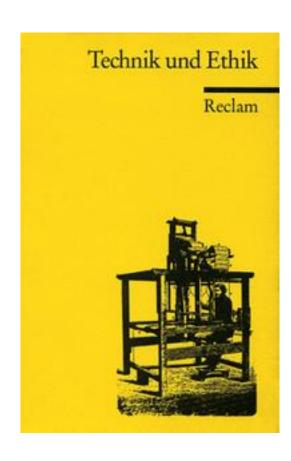
- Responsibility has become a central and guiding principle in the evaluation of actions and their consequences.
- Responsibility is a key concept in both the ethical and legal debate.
- By determining who is responsible for what and why, it is very easy to determine to which obligation the respective actors are subject or not.
- Responsibility only exists before a value horizon. This leads directly to the question which values and types of values guide our actions.

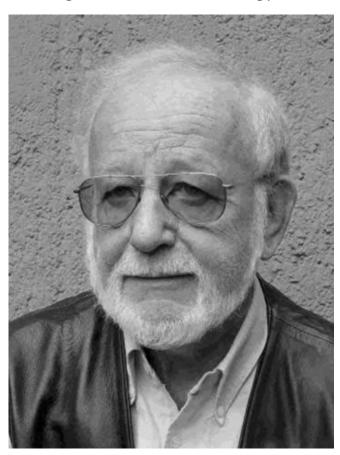
Kunzmann, P., Dalski, L., Gerdts, W.-R., Hartstang, S. (2016): Verantwortung für Mensch und Tier. Grundzüge einer (amts-)tierärztlichen Ethik.

#### Responsibility

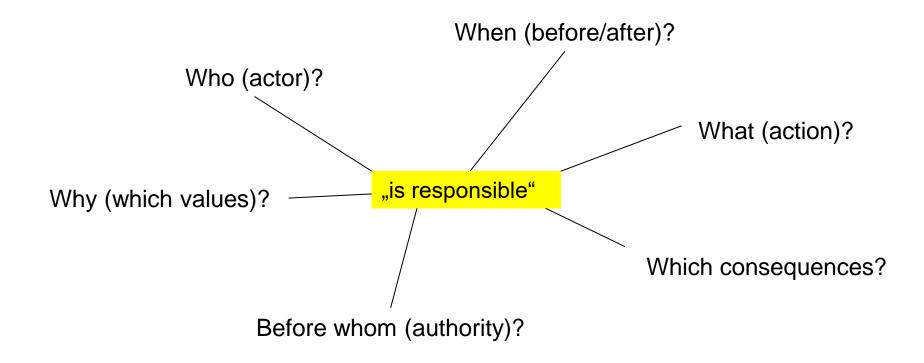
#### Günther Ropohl (1939-2017)

- Studied mechanical engineering and philosophy
- Writings on the concepts of Technik and Technologie, the ethics of technology, technology assessment, professional ethics for engineers and on the societal need for educating towards technology literacy.





## Ropohl's dimensions of responsibility



#### Ropohl applied



**BERLINER UND MÜNCHENER TIERÄRZTLICHE WOCHENSCHRIFT 28.** Mai 2020

Culling dogs to control rabies in Uganda – an example of moral distress for a veterinary officer

#### Introduction

In 2015, the WHO, the World Organisation for Animal Health (OIE), the Food and Agriculture Organization (FAO), and the Global Alliance for Rabies Control (GARC) established a goal of "zero human deaths due to canine rabies by 2030" (WHO 2015). The major burden of human rabies is attributable to dog-mediated transmission (WHO 2013). Approximately 60 000 deaths occur annually, mostly in Africa and Asia (Hampson et al. 2015). This is a conservative estimate, as underreporting due to poor surveillance of rabies cases is likely.

G Alobo, A Kahunde, V Luyckx, S Okech, J Semakula, D Agaba, S Hartnack

**DOI:** 10.2376/0005-9366-19052

https://www.vetline.de/bibcite/contributor/7213

#### Verantwortung in der Tiermedizin

#### Sonja Hartnack

**DOI:** https://doi.org/10.24445/conexus.2022.04.007

#### **Abstract**

Ziel dieses Beitrags ist es, aus der Perspektive der Amtstierärztinnen und -ärzte im Seuchengeschehen die Frage nach Fremd- und Selbstbestimmung anhand der Bestimmung der eigenen Verantwortung zu betrachten. Als Fallbeispiel dient die Tötung von 17 Millionen Zuchtnerzen im Zuge der Covid-19 Fremdbestimmung
und Selbstbestimmung
Zweiter Teil
Herausgegeben von Wolfgang Rother

# **Ethical tool Animal disease intervention matrix (ADIM)**



#### **ADIM** - The goal



- To integrate ethical and societal concerns in animal disease control
  - How to balance different (legitimate) concerns?
- To develop a system that informs about merits of intervention strategies
- Commissioned by the Belgian Food Agency
  - Working group chaired by CEO





Katholieke Universiteit Leuven Faculteit Bio-ingenieurswetenschappen Centrum voor Wetenschap, Techniek en Ethiek

#### DISSERTATIONES DE AGRICULTURA

Doctoraatsproefschrift nr. 722 aan de Faculteit Bio-ingenieurswetenschappen van de K.U.Leuven

Practice-oriented ethical models to bridge animal production, ethics and society

> Proefschrift voorgedragen tot het behalen van de graad van

Doctor in de Bio-ingenieurswetenschappen

door

Stefan AERTS

DECEMBER 200



# **Objectives**



- Protecting the health of control personnel and farmers
- 2. Protecting public health
- 3. Protecting animal health
- 4. Ensuring animal welfare
- Respecting the human-animal bond
- 6. Limiting environmental damage
- 7. Limiting the psychological impact on the farmer
- 8. Limiting the psychological impact on the control personnel

- Respecting food
- Limiting disturbance of social life
- Limiting economic losses in agriculture
- Limiting economic losses in non-agricultural sectors
- 13. Ensuring practicality
- 14. Ensuring food security
- 15. Protecting valuable animals



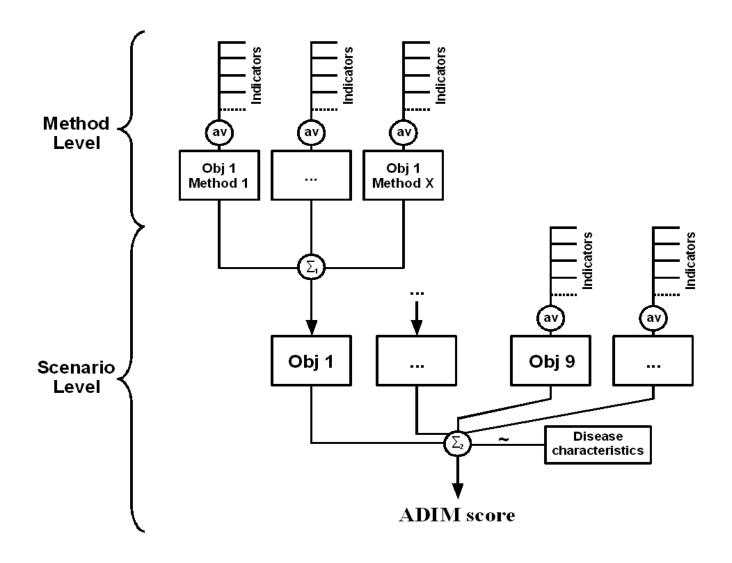
# Additional objective in CH?

16. Respecting the autonomy of the farmer

#### **ADIM: Scenarios**

## Simulation for H5N1 Avian Influenza:

- Scenario 1: general vaccination
- Scenario 2: vaccination non-utility animals, stamping-out
- Scenario 3: vaccination high-risk animals, stamping-out
- Scenario 4: stamping-out (the"classic" scenario)



# **Example objective 2: Protecting public health**

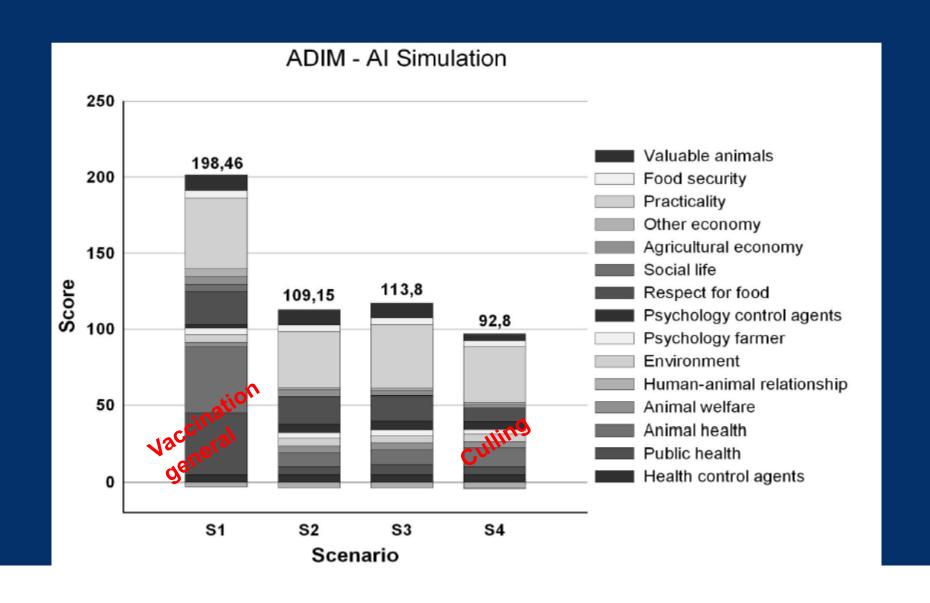
4	Α	В	С	D	Е	F	G	Н	I	J	K
Г			_			-	Method 1	Method 2	Method 3	Method 4	
	2.	Pr	otecting public health								
						Totaalscore:	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
	1	Caı	n the intervention method as	such increa	ase the pul	olic's contact with	the disease?	Estimate the	risk.		
			only the disease's presence as such is it							ontact	
		with	the disease. The latter elements are im	portant here.							
			Almost non-existent	5							
			Low	2		Score:					
)			Medium	-1							
			High	-3							
2											
3	2	Wh	nat is the minimum duration o	f contact b	etween pu	iblic and disease,	using this m	ethod?			
1			mates should be made based on previou								
5											
3			< 1 week	5							
7			1-3 weeks	1		Score:					
3			> 3 weeks	-3							
)											
)	3	If a	any wast products result from	the metho	d, are the	se relevant to pul	olic health?				
						_					
2			Almost non-existent risk	5							
3			Low	3		Score:					
1			Medium	1							
5			High	-3							
-											
3											
-											

	Α	В	С	D	Е	F	G	Н	I J
1		ADIM - Animal Disease Intervention Matrix			short description	on simulatio	n		
2									
3		Method = well-defined (sequens of) manipulations of one a	nimal						
4		Scenario = combination of methods into a comprehensive a	nimal diseas	e interven	tion plan				
5									
6		Objective	We	ighing fac	tor	Method 1	Method 2	Method 3	Method 4
7						short descr	short descr.	short descr.	
8	Metho	d level							
9	1	Protecting the health of control personnel and farmers		1		#DIV/0!	#DIV/0!	#DIV/0!	
10	2	Protecting public health		1		#DIV/0!	#DIV/0!	#DIV/0!	
11	3	Protecting animal health		1		#DIV/0!	#DIV/0!	#DIV/0!	
12	4	Ensuring animal welfare		1		#DIV/0!	#DIV/0!	#DIV/0!	
13	5	Respecting the human-animal bond		1		#DIV/0!	#DIV/0!	#DIV/0!	
14	6	Limiting environmental damage		1		#DIV/0!	#DIV/0!	#DIV/0!	
15	7	Limiting the psychological impact on the farmer		1		#DIV/0!	#DIV/0!	#DIV/0!	
16	8	Limiting the psychological impact on the control personnel		1		#DIV/0!	#DIV/0!	#DIV/0!	
17									
18					Method evaluation	#DIV/0!	#DIV/0!	#DIV/0!	
19									
20									
21	Scena	rio level				So	enario I	Scena	rio II
22						Method x		Method y	
23		Estimated percentage of animals subjected to method x:				%	%	%	%
24						#WERT!	#DIV/0!	#WERT!	#WERT!
25					Subtotal	#	WERT!	#WEI	RT!
26									
27									
28									
29		Respecting food		1		-	DIV/0!	#DIV	
30		Limiting disturbance of social life		1		_	DIV/0!	#DIV	
31		Limiting economic losses in agriculture		1		-	DIV/0!	#DIV	
32		Limiting economic losses in non-agricultural sectors		1		-	DIV/0!	#DIV	
33		Ensuring practicality		1		-	DIV/0!	#DIV	
34		Ensuring food security		1		_	DIV/0!	#DIV	
35	15	Protecting valuable animals		1			DIV/0!	#DIV	
36					Total	#	WERT!	#WEF	RT!
37									
38									



# **Example: H5N1 AI**





# **Conclusion Added values & challenges in applying a One Health framework**

Added values:

Claim 1: Vets to gain access to ethical reasoning in their professional life.

Claim 2: Existing ethical conflicts can be discussed in a transdisciplinary way.



In diesem Dokument werden die verschiedenen ärztlichen und nichtärztlichen Professionen im Gesundheitswesen (wie Pflege, Hebammenkunde, Physio- und Ergotherapie, Ernährungsberatung, Operationstechnik etc.) als «Gesundheitsberufe» bzw. die Angehörigen dieser Berufsfelder als «Gesundheitsfachpersonen» zusammengefasst.

Tab. 6. Domäne Reflexionsfähigkeit

REFLEXIONSFÄHIGKEIT						
THEMENGRUPPE	INHALTE					
Reflexionsmethoden	<ul><li>Kritisches Denken</li><li>Perspektivenwechsel und Multiperspektivität</li></ul>					
Moralische Sensitivität	<ul> <li>Identifizieren und Beschreiben von Wertkonflikten und ethischen Herausforderungen</li> <li>Rechtliche und ethische Diskrepanzen erkennen</li> </ul>					
Sensitivität für moralische Wertekonflikte ( <i>Moral Distress</i> )	<ul> <li>Unterscheiden können</li> <li>zwischen genuinen ethischen Fragestellungen und Unbehagen</li> <li>zwischen genuinen ethischen Fragen und fehlendem Fachwissen</li> </ul>					

# **Conclusion Added values & challenges in applying a One Health framework**

#### Added values:

Claim 1: Vets to gain access to ethical reasoning in their professional life.

Claim 2: Existing ethical conflicts can be discussed in a transdisciplinary way.

#### Challenges:

- 1. Speaking a common language and understanding each other.
- 2. Dispute over sovereignity of interpretation (Deutungshoheit)
- 3. Respecting disciplines and their methodology, not poaching in other disciplines. https://en.wikipedia.org/wiki/Sokal\_affair
- 4. Imbalance in proportions of human, animal and environmental health experts.





Section of Epidemiology, Vetsuisse

# Thank you