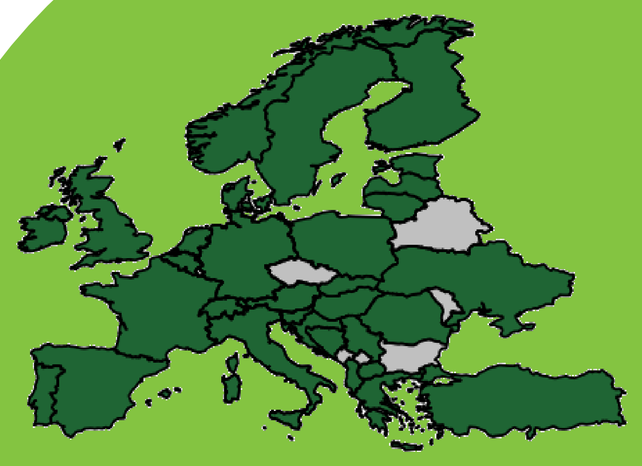
Standardizing output-based surveillance to control cattle diseases

K. Mõtus[16], T. Knific[3], J. J. Hodnik[3], X. Koleci[4], C. Correia-Gomes[5,6], S. Strain[7], J. M. Gethmann[8], G. Gunn[5], M. Henry[5], A. van Roon[2], G. van Schaik[1,2], C. Faverjon[9,10], A. Madouasse[11], P. Kostoulas[12], J. Berezowski[9], M. Guelbenzu[6], L. Costa[13], C. Fourichon[11], J. Gomes[14], B. Pinior[15], SOUND control consortium, I. Santman-Berends[1,2]



COST Action SOUND control

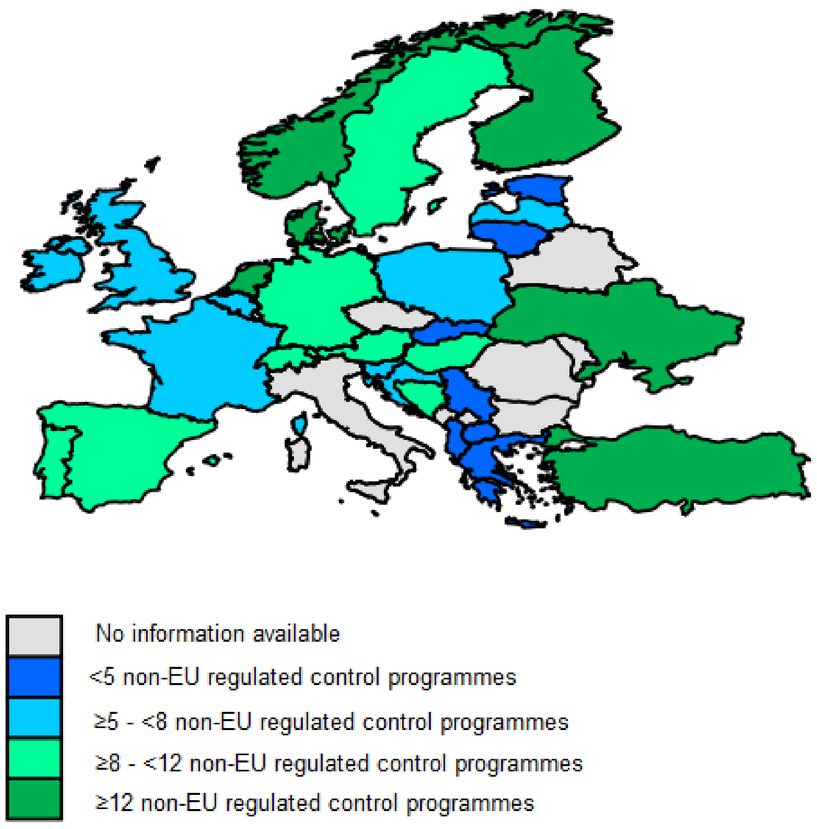
31 participating countries
More than 100 experts
5 working groups (WG)
Duration: 2018–2022

AIM

Stimulate initiatives to enable objective and standardised comparison of the outputs of different surveillance, control or eradication programmes (CPs) for non-regulated cattle diseases.

WG1: Description of disease control programmes & requirements for an output based framework

Number of control programmes per country



Preliminary output CPs

- For 25 non-regulated cattle diseases CPs in place
- On average 8 CPs per country
- Norway and Turkey: most CPs (18 and 20)
- Sweden, Finland and Denmark: free from most non-regulated diseases (13, 12 and 11)
- In most countries CP for: Leucosis (25), Bluetongue (24), IBR (23) and BVD (22)

Requirements framework

- Usable for all countries
- Possible to capture heterogeneity in context (status & risk profile country), risk factor occurrence and CP

WG2: Development of a data collection tool

- Based on previous developed tools in RISKSUR & STOC free
- Draft version discussed and improved during workshop with consortium
- Draft version tested for two extremely different countries: Netherlands and Albania

Summary		
Parameter	Netherlands	Albania
Density	High	Low
Herd size	Medium to large: average 130 cows >1 year	Small : 73% herds <5 animals, average 2
Available data	Many data routinely collected; official databases	Only little data available
Disease introduction risk	Many contacts between herds, movement control incorporated in CPs, many imports, high density	Many contacts between herds, No movement
Control programmes	Many (12); sometimes compulsory (initiated by sector), some voluntary	No compulsory CP, 3 voluntary CPs
Surveillance activities	Many active surveillance activities: national cattle health monitoring programme	No active surveillance
Risk factors	Important risk factors controlled within CP	Many uncontrolled risk factors
Biosecurity level	No randomly collected data available, qualitative guestimate possible	No randomly collected data available

WG3: Evaluation of methods & their gaps for output based surveillance

- Scenario tree models
- Bayesian networks (STOC free)
- Bayesian latent class models
- Artificial intelligence

WG4: Stimulate initiatives to address knowledge gaps and to further generalise the method

- Sociological aspects
- Economic evaluation
- Expand to other species
- Expand to regulated diseases

WG5: Communication & dissemination

VISION

A complete output-based framework for standardized and objective comparison of CPs that is supported and used throughout Europe to enhance safe trade.

info@sound-control.eu
www.sound-control.eu

Kerli.Motus@emu.ee

[1]Royal GD, Netherlands, [2]Utrecht University, Netherlands, [3]University of Ljubljana, Slovenia,[4]Agricultural University of Tirana, Albania, [5]SRUC, United Kingdom, [6]AHI, Ireland, [7]AHWNI, United Kingdom, [8]FLI, Germany, [9]University of Bern, Switzerland, [10]Ausvet, France, [11]INRA & ONIRIS, France, [12]University of Thessaly, Greece, [13]IPP, Portugal, [14]NIAV, Portugal, [15]Vetmeduni Vienna, Austria, [16]Estonian University of Life Sciences

Funded by the Horizon 2020 Framework Programme of the European Union