

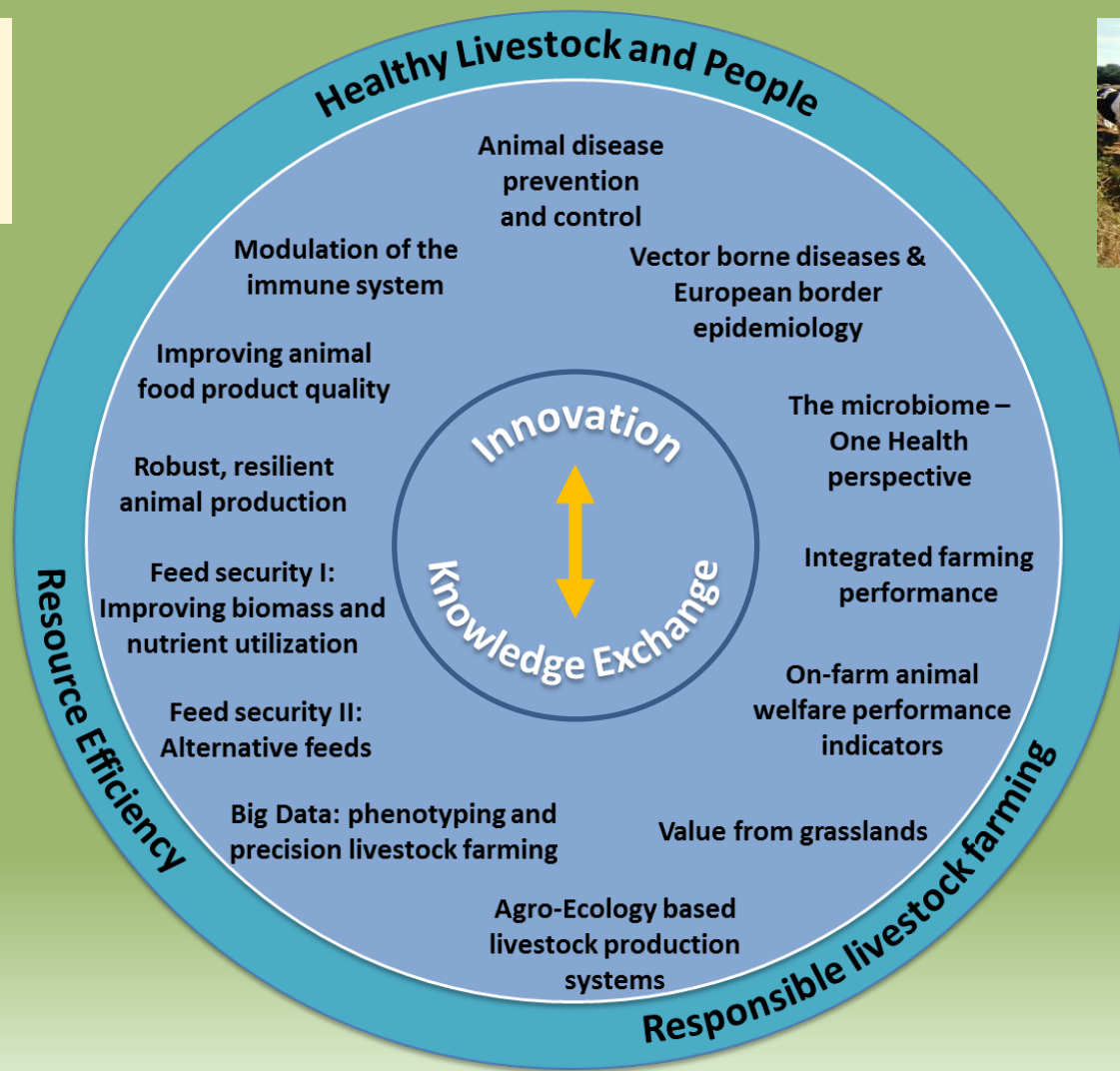


Research priorities for modelling livestock and grassland systems in Europe under climate change

Kipling, R.P., Bannink, A., van Middelkoop, J. and Scollan, N.D.

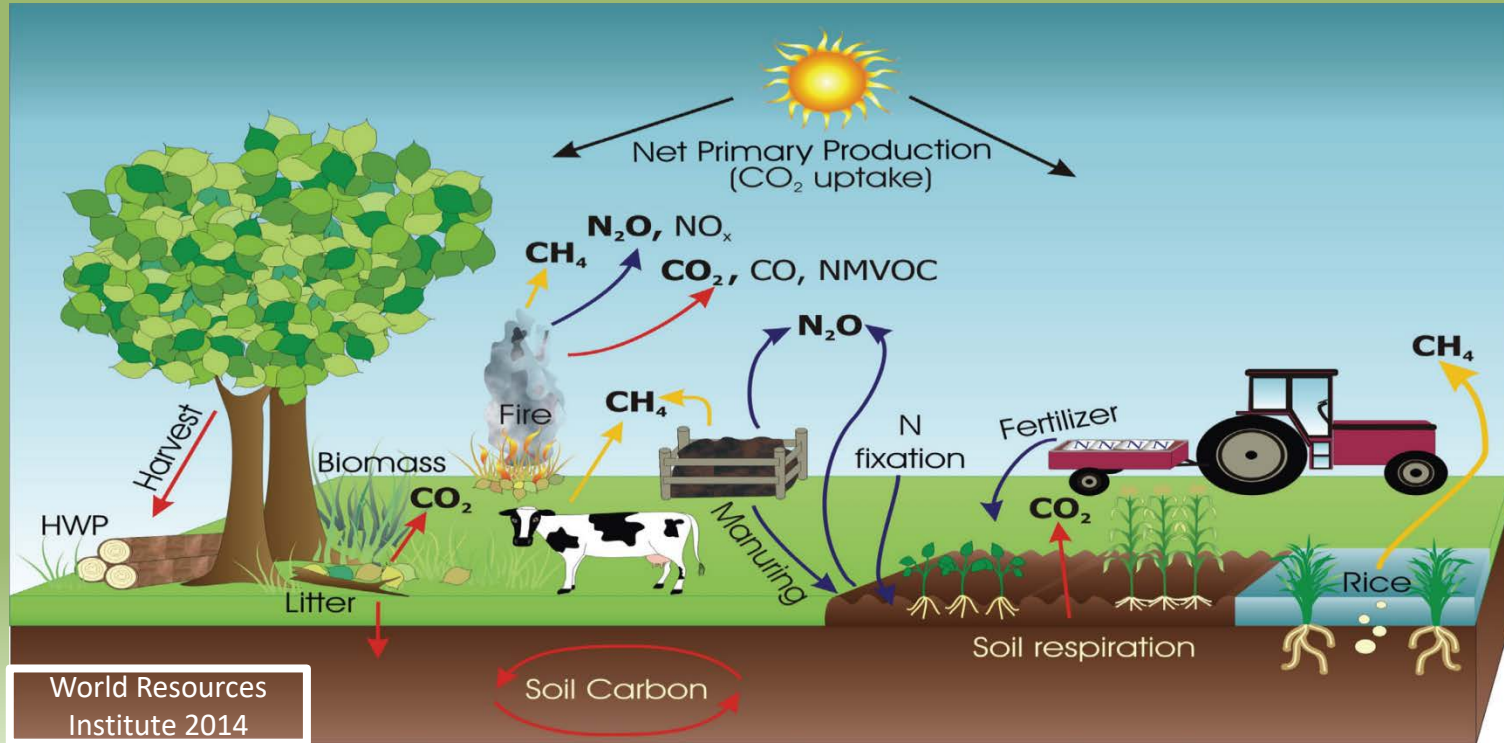


ATF Priorities for livestock systems



Why Model?

To understand complex systems
Risk-free exploration of choices



The challenges

Communicating outputs

Assumptions and uncertainty

Shaping views



Types of model

Empirical	Process based
Statistical relationships	How relationships work
Depends on underlying data	Data requirements
External changes may alter relationship	Reveals how changes alter relationships
Easy to develop and use	Long development time



On-farm use
Decision support
Urgent cases



Research use
Long-term predictions
Better understanding



70 institutes in 18 countries

Varied funding

- Capacity building
- Integrated modelling



CropM



TradeM



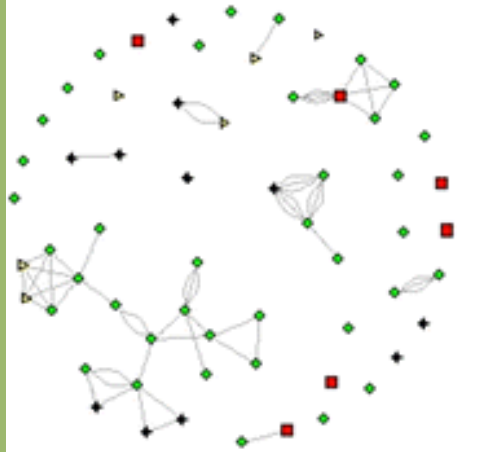
LiveM



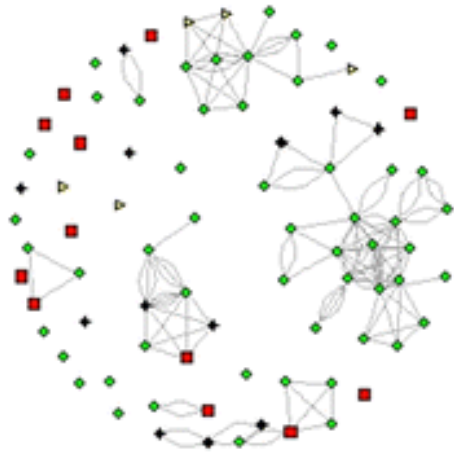
Leadership

Competitive and goal-driven
Focused on problem solving
Expertise in research subject

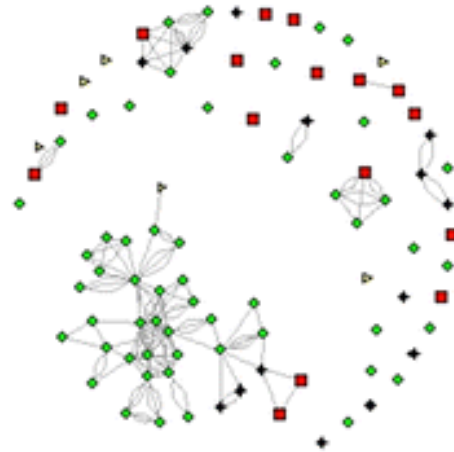
2008 – 2010



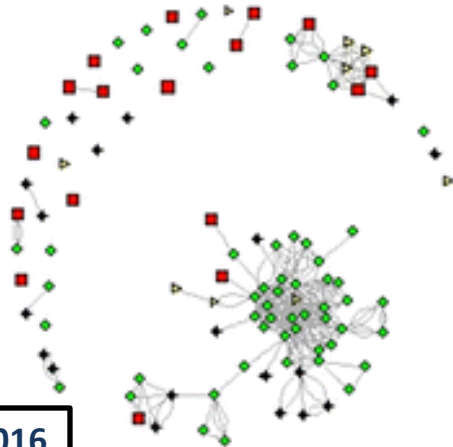
2009-2011



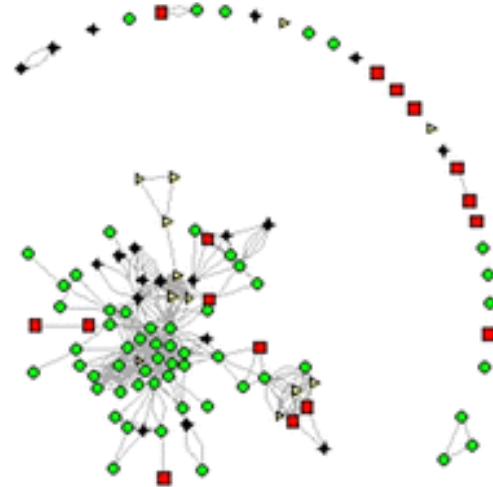
2010-2012



2011-2013



2012-2014



Setting the Research Agenda



Livestock health and
disease modelling
workshop



Grassland vulnerability and
quality modelling workshop



Mediation of climate change impacts by site, system & management (2)



Building capacity (3)

15 KEY CHALLENGES

Direct & indirect effects on sward (7)

Climate change effects on grassland system outputs (3)

Review

and prior ... telling E

limat

tu Virkajärvi^c, Peter^c,
sson^f, Sy... Höglind^g, Kir

, Claas Nendel^h, Tomas Persson^g, Catherine Picon-Cochard^j, Susanne Rolinski^k, Daniel L. Sandars^l, Nigel D. Scollar^m, E. Topp^o, Stanislaw

Twardy^p, Jantine Va

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doi:10.1016/j.scitotenv.

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Modelling
impacts on
health

(3)

Model scope
& relevance

(4)

Modelling
pathogens & vectors

(2)

18 KEY
CHALLENGES

Data &
evaluation

(4)

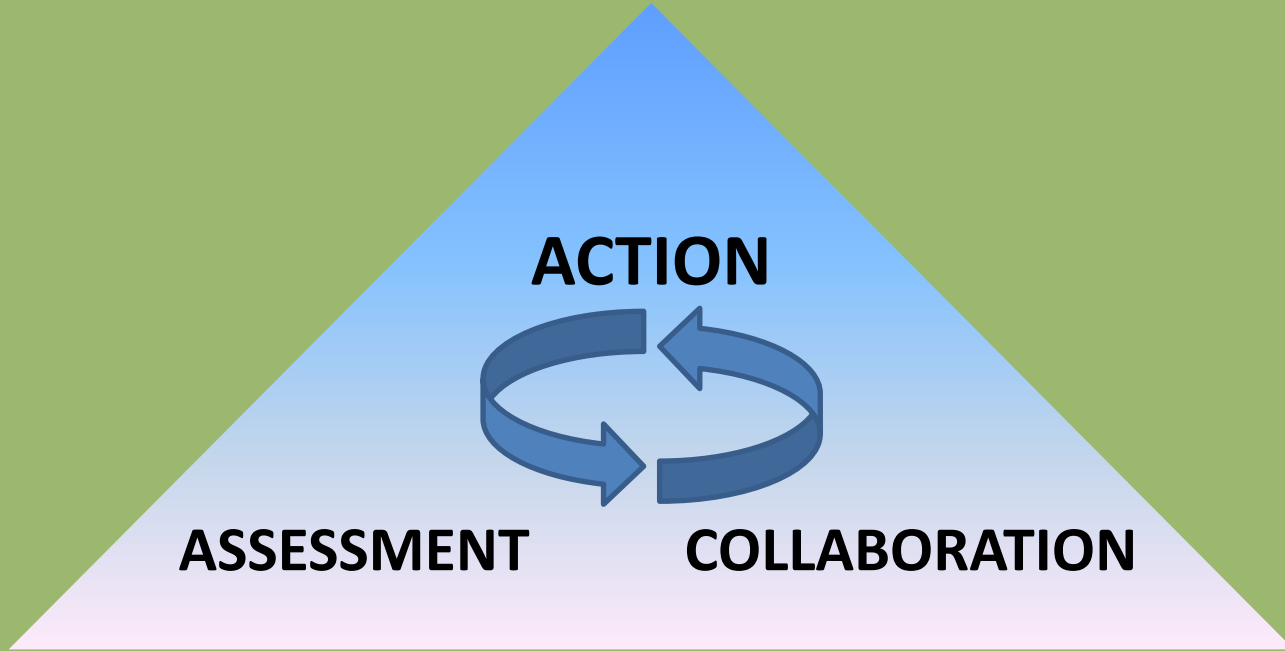
Modelling impacts
of poor health

(2)

Modelling
interactions &
management

(3)

Conclusions



**Long term networks to build capacity
and support joined-up approaches**

Thanks for listening



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