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Organization of the  
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European Commission for the  
control of foot-and-mouth disease



European  
Commission



## 43<sup>rd</sup> General Session of the EuFMD



**EuFMDiS**  
European Foot and Mouth Disease  
Spread model

# Modelling FMD and transboundary diseases at European scale: potential for optimizing control measures at regional and national scales

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**Marko Potocnik**

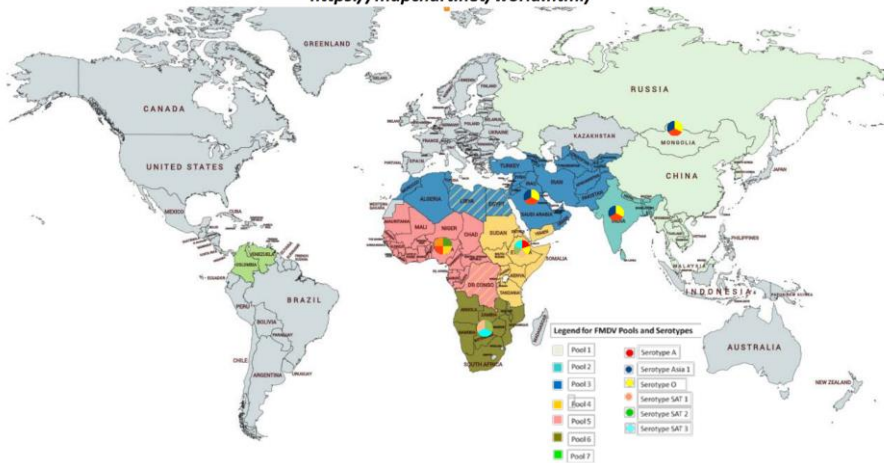
*Administration of the Republic of Slovenia for Food safety, Veterinary sector and Plant protection*



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# EU remains vulnerable for TAD incursions

MAP 1: Foot-and-mouth disease (FMD) virus pools: world distribution by serotype in 2013-2017 (source EuFMD, <https://mapchart.net/world.html>)



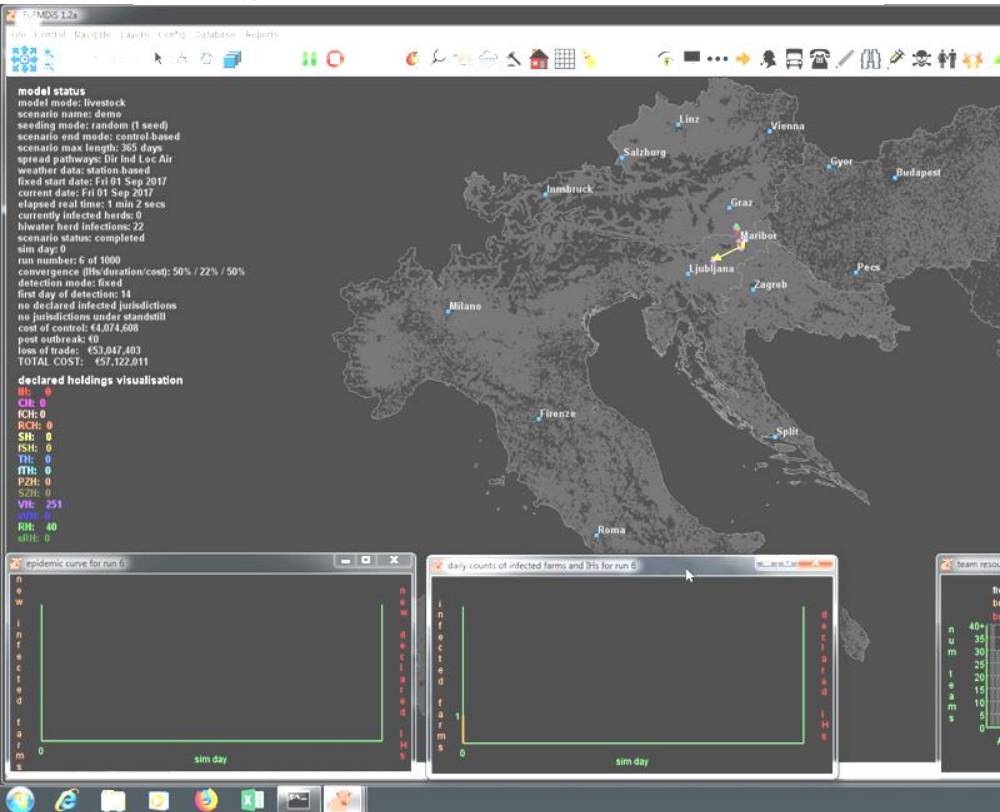
- Continuous global threats for TADs
- FMD remains high on list
- High impact in EU open market
- Need for well-developed contingency planning
- Plans and preparedness need to be tested



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- Conceptual hybrid modelling approach of the Australian Animal Disease (AADIS) model.
- Stochastic simulation model that considers variability and uncertainty
- Simulation of within and between country spread
- Easy click-on configuration of numerous control and scenario options
- Realtime display of outbreak attributes
- Direct reporting of outbreak data consequences
- Valuable training tool
- Powerful and easy-to-use



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# Case Study for Slovenia

**Marko Potocnik**

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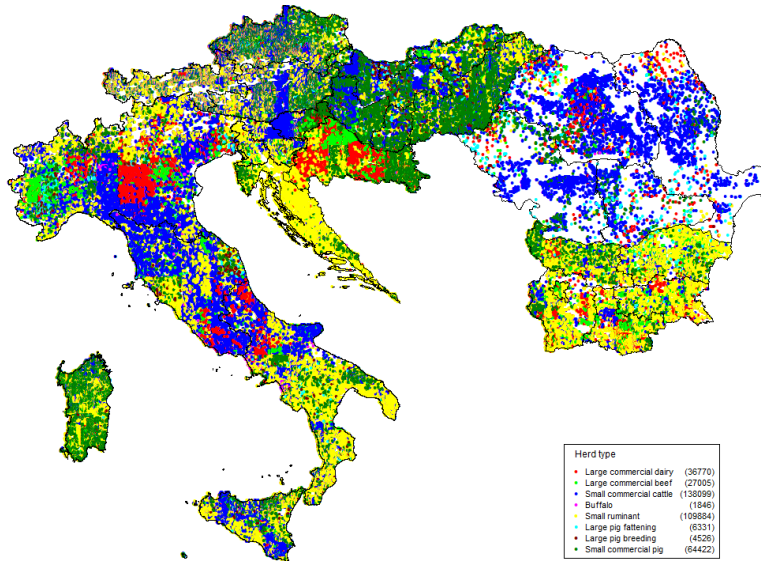


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### Upscaling EuFMDiS



- Initially requested by Central European CVO Forum
  - Operational in 7 EU pilot MS:
    - IT, AT, SI, HR, HU, RO, BG
  - Adaption to additional MS and their settings
    - ES and IE will join soon
  - Opportunity for assessing intra-community spread and impact of FMD
  - Assess EU-wide impact of control options
    - Movement restrictions
    - Culling policies
    - Vaccination strategies
    - Biosecurity measures
  - Incorporate wildlife component
  - Extend to other diseases
- => EU-wide participation and engagement



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# EuFMDiS Advisory Group



## Strategy and Operational Plan 2019-2023 for EuFMDiS:

- Extend EuFMDiS to a pan-European setting and make it available in additional countries
- Additional developments within the FMD context
- Adding new diseases



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### EuFMDiS Objective

Contribute to Europe-wide systematic support delivered to risk assessment, contingency planning and targeting of interventions through modelling of national and regional control measures for FAST diseases.



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# Extend EuFMDiS to a pan-European setting and make it available in additional countries

- Increase awareness
  - Publication in scientific journals
  - Presentation at conferences and meetings
  - Publish on website
- Validation and independent review
  - Peer review
  - External assessment
  - Extensive testing
- Engage the user community
  - Webinars and discussion forum
  - Users support
  - Proficiency testing
- Pan-European data collection
- User agreement and data sharing license



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# Additional developments within the FMD context

### Priority

- Additional spread pathways:
  - Common grazing on pastures
  - Markets
- Include locations of rendering plants and slaughterhouses

### Very nice to have

- Include animal welfare consequences
- Include enhanced biosecurity as control option

### Nice to have

- Include wildlife component



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# Adding new diseases

- Priority to pan-European extension for FMD
- Vector-borne diseases have higher priority
- Non-vector borne diseases controllable by vaccination
- Identification of diseases is to the General Session



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# Endorsement of the Advisory Group

- Technical experts can be added to provide technical guidance
- Representation of the user group
- Geographical representation, e.g. Eastern Europe, Mediterranean region
- Include experts from industry organisations
- Representation can alter according to the agenda
- Meetings to be planned when necessary



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# Conclusions

- EuFMDiS is a powerful and easy-to-use tool that simulates FMD spread within and between countries.
- EuFMDiS provides high value for EU-wide contingency planning as it models spread, impact, success of control measures, availability of resources at a multi-country level.
- It would be an opportunity to further develop EuFMDiS to model FMD and transboundary diseases at European scale.



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# Thank you

**Meet the EuFMDiS team at the demo  
stand in the atrium:**

**Tiziano Federici**

**Enrico Mezzacapo**

**Maria de la Puente**

**Koen Mintiens**

