



Animal &  
Plant Health  
Agency

*“Safeguarding animal & plant health for the benefit of people, the environment & the economy”*

# Satellite Applications for Animal Welfare Management

22nd January 2021



## CAPABILITIES AND CHALLENGES - Key challenges in Animal Health

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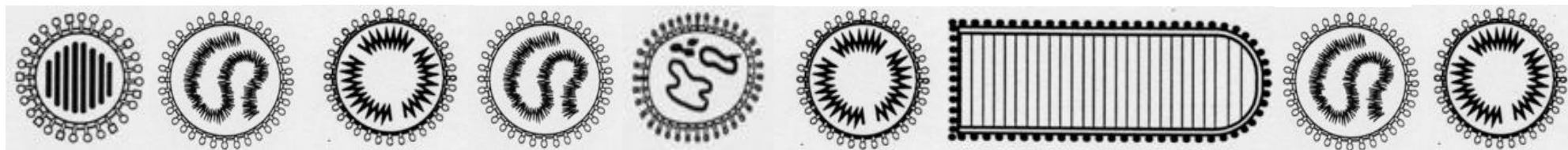
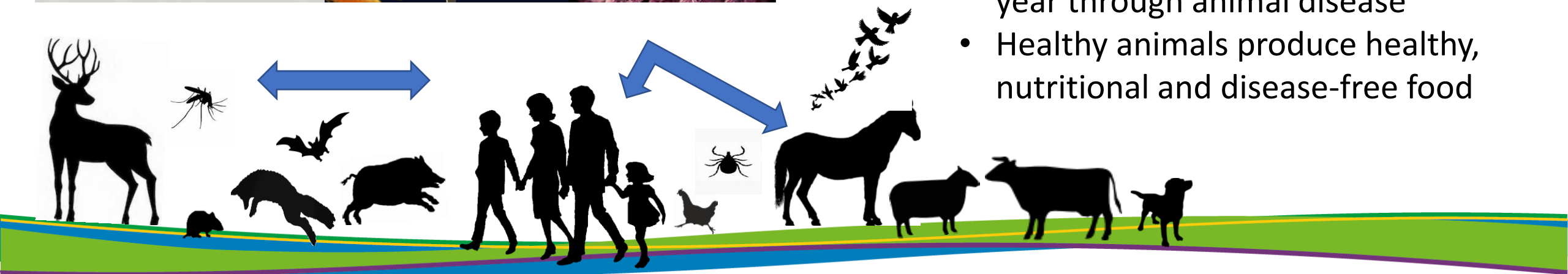


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# One Health: Human-Animal-Environment



- 1 in 3 people fall ill every year from an animal-borne disease
- 20% food production is lost every year through animal disease
- Healthy animals produce healthy, nutritional and disease-free food



# Focus – Population Growth, Deforestation, Global Food Security, Climate Change Impacts

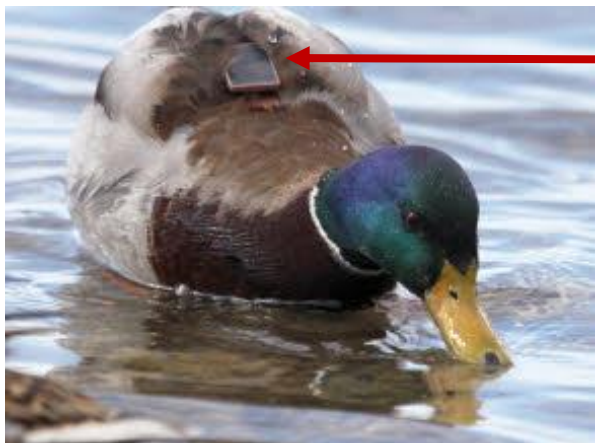
- Animal and Human Health impacted by
  - Weather - rainfall, temperature, wind >> prediction
  - Land use – environment, carbon storage, soil quality
  - Disease X; deforestation, bush meat, biodiversity
- Data Science, machine learning
- Harness the global parameter data

- **Migrating Bird Examples**

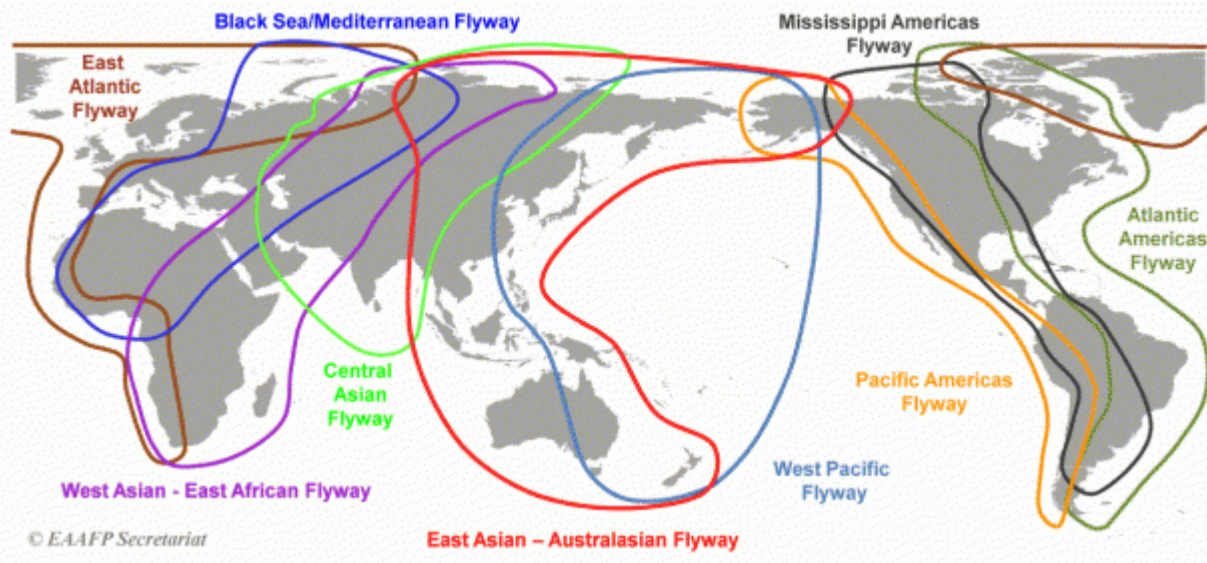
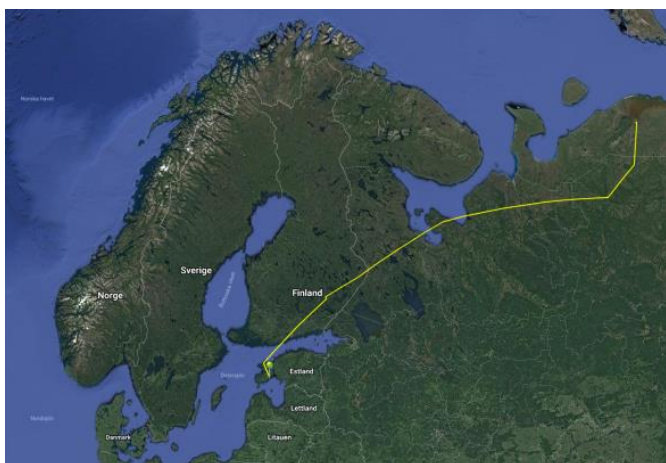


# Avian Influenza – Bird Flu

<https://lnu.se/en/research/searchresearch/forskningsprojekt/project-ducks-and-disease-waterfowl-migration-and-transmission-of-avian-influenza-virus/>



- Global AIV poultry outbreaks associated with Wild bird migration, isotherm changes, flooding etc





# Acknowledgements

- AZVDP – animal and zoonotic viral disease portfolio
- Wild birds – Adam Brouwer & <https://lnu.se/en/staff/jonas.waldenstrom/>
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- VEO – Risk Assessments, Emma Snary & Rachel Taylor
- AMR – EJP OH, Muna Anjum
- Data Sciences – Adam Brouwer, Robin Simmons

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