ISVEE 18
Cape Town, South Africa, 2027

18th Symposium of the International Society for Veterinary Epidemiology & Economics

ISVEE18 Scientific Programme

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Introduction

The 18th International Symposium on Veterinary Epidemiology and Economics (ISVEE18) will be held in Cape Town, South Africa, under the overarching theme ***Development through Diversity***. This captures the unique strengths and perspectives that Africa brings to the global epidemiology community - diversity of ecosystems, species, diseases, people, and ideas - and highlights the role of inclusive, sustainable, and collaborative approaches in driving development through science.

Our guiding principles for the conference will be to:

- Celebrate diversity in systems, approaches, and disciplines;
- Promote inclusivity and participation across regions and professions;
- Highlight African innovation and its global relevance;
- Bridge research and implementation – i.e. how we turn data into action;
- Sustain the ISVEE tradition of methodological excellence and practical relevance.

Overarching scientific structure

ISVEE18 will be organised into five major scientific themes with a keynote speaker representing each of these themes. Across all themes, the programme will be guided by cross-cutting priorities of sustainability, innovation, participation, and engagement with the wildlife sector, with explicit consideration of environmental and ecological factors. Subject to submissions we will tag talks throughout the programme to facilitate their links to various categories (e.g. Early career/Prizes/ISESSAH) or to cross-cutting themes that don't have their own established stream.

ISVEE18 maintains continuity with the ISVEE legacy by retaining a core methodological focus while adapting the framing to African strengths in participatory approaches, sustainability, and innovation. It integrates climate and environmental resilience as a unifying concept and encourages policy impact and community benefit as endpoints of epidemiology.

Theme 1: Epidemiologic methods for a changing world

Innovation, tools, and real-world investigation driving the future of epidemiology.

This theme integrates the analytical, technological, diagnostic, and field-based foundations of modern epidemiology. It showcases how modelling, artificial intelligence, digital tools, vaccinology and diagnostic innovation intersect with

practical epidemiologic investigation in real-world settings - from farms and communities to the wildlife sector, laboratories and surveillance systems. It also considers environmental, climatic and ecological drivers of disease dynamics and surveillance.

Sub theme 1.1: Analytical, modelling and quantitative methods

- Multi-level, spatial, temporal, and Bayesian models
- Vector-borne disease dynamics including environmental, ecological and climate driven considerations
- Simulation modelling and scenario analysis
- Artificial intelligence, machine learning, and predictive analytics
- Quantitative risk and epidemiologic analysis
- Model validation in real-world contexts
- Molecular epidemiology

Sub theme 1.2: Digital and connected epidedmiology

- Digital and participatory surveillance platforms
- Integration of ecological and climatic data into epidemiologic analysis and surveillance
- Mobile and cloud-based data capture in the field including the implementation of citizen science in epidemiologic studies
- Digital tools for surveillance, outbreak detection and response
- Open and transparent data, data governance, and interoperability

Sub theme 1.3: Investigative, diagnostic and laboratory innovation

- Diagnostic test validation, performance, interpretation and application
- Field-deployable diagnostics and point-of-care tools
- Study design and diagnostic and sampling strategies
- Integrating lab diagnostics with digital and surveillance systems
- Vaccine development, immunogenicity evaluation, field effectiveness studies, and integration of vaccination data into surveillance and modelling systems
- Integrating field observations/data with modelling and diagnostic data
- Field trials, operational research, and pilot implementations
- Barriers, enablers, and innovations in applied field epidemiology

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Theme 2: Frontline and participatory epidemiology – Communities driving change

Real epidemiology, real impact

This theme unites participatory approaches and frontline experiences to showcase the practical side of epidemiology — where community insight, local innovation, and scientific methods intersect. It reflects Africa's leadership in field-based, inclusive, and solution-oriented epidemiology that translates research into resilience.

- Participatory disease surveillance and mapping
- Field-based investigations and outbreak response
- Co-creation of knowledge with communities and local actors considering indigenous insights and traditional input
- Innovation from the field: locally developed tools and methods
- Building trust and engagement for sustainable impacts
- Lessons learned from real-world implementation of epidemiology
- Resilience of smallholder/community systems

Theme 3: One Health, One Planet, diverse communities

Interconnected systems, shared responsibility.

This theme reinforces the integration of animal, human, and environmental health within the socio-ecological context. It highlights the interdependencies between ecosystems, communities, pathogens, and practices — with antimicrobial resistance (AMR) and use (AMU) as a key cross-cutting example of how shared actions, pressures, and behaviors influence global health.

- Surveillance for zoonoses and conditions of public health importance
- Wildlife – domestic animal – human interfaces
- Ecosystem health and biodiversity
- Cross-sectoral collaboration
- AMR and AMU surveillance and stewardship in animals, humans, and the environment
- Agricultural and food-system drivers of AMR and AMU

Theme 4: Economics, welfare, and sustainable development

From evidence to impact.

Economic and welfare outcomes play a large role in sustainable animal health systems. This theme explores how evidence-based economic analysis, policy design, and welfare considerations shape resilient, productive, and ethical animal health systems that support trade, livelihoods, and community wellbeing.

- Economic evaluation of prevention and control programmes, including vaccination, welfare, surveillance and One Health interventions
- Integrating welfare metrics into productivity and economic impact assessments
- Trade and market access for animals and animal products considering economic and welfare standards
- Valuing animal welfare improvements within One Health and sustainable development frameworks
- Socio-economic implications of welfare policies, particularly in low- and middle-income contexts

Theme 5: Policy, capacity building, and the Science-to-Policy interface

Developing through diversity of minds.

Sustainable animal and public health systems depend on the capacity of people and institutions to generate, interpret, and apply scientific evidence for policy and practice. This theme explores how epidemiologic data are translated into policy action, how education and partnerships nurture leadership, and how collaboration across sectors ensures that science informs decision-making at every level.

- Epidemiology training and curriculum innovation across educational levels
- Strengthening public-private and intersectoral partnerships for capacity development
- Science-to-Policy interface: communication, evidence synthesis, and advocacy
- Bridging research and implementation in animal and public health governance
- Building institutional frameworks that enable evidence-based decision-making
- Leadership, mentorship, and equity in policy and scientific spheres
- Developing regional networks for continuous professional development and policy engagement