

ADVANCES

Working towards the next generation of animal health surveillance tools: the RISKSUR project

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The RISKSUR research project is aimed at developing decision support tools for the design of cost-effective, risk-based animal health surveillance funded under the European Union's Seventh Framework Programme (FP7). The research is being undertaken using surveillance data from animal disease prevention and control programmes implemented in European countries.

The first decade of the twenty-first century was marked by several animal health events of global impact, including outbreaks of influenza H5N1, H1N1 and H7N9. The emergence and spread of these zoonotic diseases were concurrent with increasing globalization and intensification of animal production, in response to increased

demand for animal protein, particularly from emerging economies. Following the global financial crisis in 2007–2008, budgets for government surveillance activities had to be reduced due to widely adopted financial austerity policies. Given this situation, the effectiveness of surveillance has to be urgently improved so that we are able to deal with future disease outbreaks, since it is considered more a matter of when rather than if they will occur. One requirement for achieving improved protection of human health is more effective linking of human and animal health surveillance information consistent with the One Health approach. Given the wider scope of this approach, the RISKSUR research project will make its contribution towards cost-effective

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The RISKSUR team at the first annual meeting in autumn 2013 in Uppsala, Sweden

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Dera Ghazi Khan, Pakistan - Flood victims buying and selling livestock at a local animal market. Because of animal feed shortages, loss of livestock and poor access because of flooding attendance and prices are lower than usual.

animal surveillance by utilizing novel scientific methodologies and integrating epidemiological approaches with socio-economic and qualitative methods.

The three-year project led by the Royal Veterinary College (RVC) started in November 2012, and involves a transdisciplinary consortium of 12 partners from 10 different countries with internationally recognized expertise in animal disease surveillance methodologies and economic evaluation. The consortium also has applied experience in delivery of surveillance programmes in a variety of socio-economic contexts from national and global perspectives as well as expertise in the translation of research into practical applications.

The research involves the development of a conceptual evaluation framework that examines the purpose of animal health surveillance from a holistic systems perspective, with a particular emphasis on economic aspects. The epidemiological surveillance methodologies are covered under three categories: 1) detection of exotic, new or re-emerging diseases; 2) demonstration of freedom from disease; and 3) prevalence estimation and case detection for endemic disease. The work under each of the topics will be integrated into a common epidemiological and economic evaluation framework. This framework will

then be translated into a set of practical surveillance decision support tools for policy-makers.

RISKSUR is organized in different work packages (WP). WP 1 will develop a conceptual generic framework for design of

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risk-based surveillance systems, including novel scientific methods. These methods will be developed for each of the above three surveillance categories or objectives in WPs 2 to 4. The results of these WPs

will be evaluated for single and multi-objective surveillance systems specifically in relation to their efficiency in WP 5. The transfer of knowledge and technology to key stakeholders from policy and industry is facilitated through the development of tools assisting the implementation of the systems under WP 6 as well as communication and training in WP 7. FAO is contributing to WP 5 (evaluation of epidemiological and economic effectiveness of surveillance systems), WP 6 (decision-making tools for implementing risk-based surveillance) and WP 7 (training, dissemination and communication).

The outputs from the RISKSUR research will integrate epidemiological with economic approaches and through the development of a common evaluation framework will, for the first time, allow their application to a wide range of animal diseases and surveillance goals. As an international organization and partner of RISKSUR, FAO is committed to adapt some of the tools developed for countries in Europe under RISKSUR to the socio-economic context of developing countries and to deliver specific training for veterinary services.

For additional information please visit www.fp7-risksur.eu, where it is possible to also subscribe to the project's newsletter and RSS feeds. For further information and queries, contact info@fp7-risksur.eu. ³⁶⁰