

## **Why social scientists are so important to One Health**

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The One Health approach is a core concept integrating environmental aspects with human and animal health (domestic and wild animals). This paper argues that social scientists are crucial to the success of One Health on two fronts: firstly, social scientists provide illuminating insights into the human behaviours so important in disease emergence and spread; and secondly, to assist the different scientific disciplines to communicate effectively within their multi-disciplinary teams.

In the recent past, One Health activities have focused on emerging infectious disease - especially those arising at the human-animal interface - and more recently on food security. The discourse has largely been driven by the biomedical sciences<sup>1</sup> with a focus on the pathogen and the animal and associated production system(s). Historically human behaviour in relation to the domestication and production of animal species has been a major driving force behind the emergence of disease. Throughout the course of time diseases have tended to emerge and maintain themselves in centres where human and animal density is high or where human activities encroach on naive environments.<sup>2</sup> Disease control and food security models that address causes of disease emergence, transmission, and spread and the causes of food insecurity that are linked to human behaviours, and the sociocultural and political systems<sup>3</sup> that guide and constrain them, will likely be more cost-effective. Participatory epidemiology – which is built on qualitative social science methodologies – offers a meaningful and efficient way to engage communities in disease control measures.<sup>4</sup>

One Health teams bring together scientists from many disciplinary backgrounds, each with their own vocabulary, professional standards and communication styles. It often takes one to two years for multi-disciplinary teams to learn to work together effectively. Usually those that do so have invested considerable time in communication, improving listening skills and developing an environment where individuals can admit that they are not understanding but would like to learn more about the perspectives used by others. Social scientists such as social anthropologists are trained listeners and observers and frequently are aware of miscommunication well before other team members. Improved communication will lead to better performance.

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<sup>1</sup> Janes, C.R., Corbett, K.K., Jones, J.H., and Trostle, J. 2012. Emerging infectious diseases: the role of social sciences. *The Lancet* **380**: 1884-6.

<sup>2</sup> Alders, R.G., Bagnol, B., Farrell, P., Fornace, K., Gleeson, L., Kock, R., Rushton, J. and Rushton, R. 2012. The human dimensions of food safety and biosecurity with special emphasis on chronic food and financial insecurity. *Emerging Infectious Diseases Symposium Abstract Booklet, CSIRO, Geelong, 22-23 October, 2012*, p. 57.

<sup>3</sup> Forster P. On a Wing and a Prayer: Avian Influenza in Indonesia. In: Scoones I, editor. *Avian Influenza: Science, Policy and Politics*. London: Earthscan, 2010. p. 131-67.

<sup>4</sup> Catley, A., Alders, R.G. and Woods, J. 2012. Participatory epidemiology: approaches, methods, experiences. *The Veterinary Journal* **191**:151-160.