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## Brucellosis in Ruminants in two Counties of Yunnan, China and the Use of an Integrated Approach for Effective Control

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### Abstract

Brucellosis is an increasing production and public health concern in many countries of Asia including China. Challenges for an effective control include lack of collaboration between sectors or uncontrolled animal movement (among others). Yunnan might be at particular risk as ruminants are increasingly introduced from other parts of China e.g. Inner Mongolia, a known high prevalence area in a response to a higher demand for milk. To face this challenges, new integrated approaches are needed such as Ecohealth to support transdisciplinary collaboration versus silo thinking, the latter rather common in the top down animal health control system of China. In the presented research, which was part of an IDRC funded ILRI-Ecozd project, veterinary, public health, animal science experts from five provincial institutions, practitioners from the project sites, and policy authorities worked together to achieve a more effective control of brucellosis. The research was carried out between 2011 and 2013 in two counties of Yunnan, Mangshi and Yiliang and consisted of a historical data review, biological sampling (milk) in herds/households with dairy ruminants and people at risk (serum). Questionnaires were used to collect management data (N=192) from farmers; focus group discussions (villagers) and in depth interviews (village vets and human doctors) gained information on perception and awareness on zoonoses in general and more specifically on the targeted disease. Results from the biological sampling indicate brucellosis as an existing and potentially emerging public health concern depending on the production system. Risk factors for the spread of brucellosis were reported and included risky handling of aborted fetus among others. Awareness and perception on zoonoses (including brucellosis) of all interviewed groups was in general low. The use of a “learning by doing” EcoHealth approach led to improve team member’s capacity on Ecohealth and its practical realisation in a field study, e.g. by building up collaboration between those institutions but also stakeholders. Crucial was the support by the Agriculture Department and Health Department of Yunnan. Outcome mapping indicated a change of behaviour in the targeted groups in particular on zoonoses knowledge and willingness to share of information between sectors (vet and public health).

**Keywords:** Brucellosis, EcoHealth, yunnan