

WILDLIFE HEALTH PROGRAMS TO PROTECT LIVESTOCK

- **Newman S.H., McCracken T.**

The Emergency Prevention Systems (EMPRES) Wildlife Unit, Animal Production and Health Division, Food and Agriculture Organization of the United Nations (FAO), Viale delle Terme di Caracalla, 00153, Rome, Italy

It has become clear that the emergence of infectious diseases is complex and is driven to some extent by ecosystem changes resulting from the growing global human population, increased demand for livestock-based protein, unsustainable natural resource consumption, biodiversity loss and habitat fragmentation, which lead to the loss of ecosystem services. Therefore, the old paradigm of wildlife health, which typically addresses specific health impacts (disease or toxin) that affect a single wildlife species, has become obsolete. While there are still examples of wildlife health projects to protect livestock from specific diseases including bovine tuberculosis, brucellosis, corridor disease, or foot and mouth disease, to name a few, they often involve geographically targeted efforts to maintain captive-bred or free ranging disease free wildlife, targeted vaccination of sub-populations of wildlife, and fencing.

More recently, wildlife health programs that protect livestock are multidisciplinary and address elements of livestock, wildlife, and in many cases, human health. New interfaces between sectors results from intensification of farming, farming new species, altered landscapes, shifting demographics, regional conflict, political instability, irresponsible trade, animal translocations and/or animal or plant introductions and demonstrates the importance of integrating agroecological elements into understanding of disease ecology. As a result, in order to protect livestock through future wildlife health programs, local, regional, national and international efforts should consider the following elements; 1) capacity building and training that engages the Ministries and personnel responsible for wildlife and natural resource management, livestock and agriculture, public health, and land-use planning or development; 2) targeted wildlife disease surveillance embedded in broader national and regional surveillance strategies at locations determined to be high risk for transmission across sectors; 3) livestock-wildlife interface and disease ecology projects that help better define high risk areas for disease transmission by characterising wildlife habitat use; 4) multi-sectoral disease outbreak response training for wildlife and livestock events; and 5) improved wildlife (and livestock) disease intelligence. Elements of this multi-faceted approach will be highlighted from ongoing FAO wildlife health projects aimed at protecting livestock, livelihoods, and people.

