

Communities and Wildlife Health Surveillance

A case study of the Inclusive Conservation Initiative in northern Kenya

Community conservancies come with risks of disease transmission between wildlife, domestic animals, and/or people. This can negatively impact conservation outcomes and poverty alleviation efforts. Pastoralists hold valuable – yet underutilised – knowledge of wildlife health and disease that can support animal health surveillance in community conservancies. This study aims to identify opportunities and challenges for including pastoralists in wildlife health surveillance in community conservancies.



IMAGE 1: ANIMAL DISEASE RANKING ACTIVITY

METHODOLOGY

- Key informant interviews, field (walking) interviews, focus group discussions
- Participatory epidemiology tools
 - Disease listing and ranking
 - Transmission discussions
 - Oral histories of disease

55 PARTICIPANTS from IL NG'WESI and KOIJA

FIGURE 1. SAMPLE OF DATA COLLECTED

Scientific name	Local name(s)	Species affected	Symptoms
Coenurosis	Ormilo	Cow Goat Sheep Camel	<i>As described by pastoralists:</i> circling, problems with spine, unusual gait, intense bellowing, spine and emancipation
	Sirko	Zebra Antelope Gazelle	<i>As described by vets:</i> lack of coordination, blindness, head deviation, stumbling, and paralysis
Filariasis	Enkeeya oo munyi (ormonkoi)	Cow	<i>As described by pastoralists:</i> lesions and oozing or bleeding wounds on back, tail, and near udder
		Rhino Giraffe	<i>As described by vets:</i> severe dermatitis (inflammation of the skin), severe itching, skin that bleeds easily
Peste des Petits Ruminantia	Olodua	Sheep Goat	<i>As described by pastoralists:</i> diarrhoea, coat changes, full or partial blindness, coughing, swollen gall bladder, coughing
		Buffalo Eland Impala Gazelle Giraffe Warthog	<i>As described by vets:</i> dull coat, thick mucoid discharge, coughing, depression, sores on mouth, emaciation, diarrhoea

OPPORTUNITIES

- Pastoralists can reliably assess wildlife health and describe transmission routes between livestock and/or people
- Pastoralists' knowledge of wildlife health and disease could help address gaps in wildlife health surveillance and improve early warning systems for rapid disease detection and response
- Improved communication and collaboration between pastoralists and wildlife health authorities on issues pertaining to wildlife health may build greater support for conservation in community conservancies
- Including pastoralists in wildlife health surveillance can further the health and data sovereignty of Indigenous communities

CHALLENGES

- Many animal diseases lack distinct clinical manifestations; reports from pastoralists require further investigation
- Resource constraints plague community wildlife health surveillance initiatives, such as the cost of platform/app design, training and verifying community reports
- There are concerns and biases about the reliability of pastoralists' knowledge of wildlife health and disease
- Pastoralists may only report on wildlife health if benefits are perceived, such as rapid response to disease outbreaks by authorities

RECOMMENDATIONS

- Trial community-based monitoring of wildlife health in community conservancies
- Establish a platform (e.g. WhatsApp) to facilitate disease reporting and improve communication and between communities members and vets

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RELEVANT LITERATURE

Hassell, James M., Dawn Zimmerman, Eric M. Fèvre, Jakob Zinsstag, Salome Bukachi, Michele Barry, Mathew Muturi et al. "Africa's Nomadic pastoralists and their animals are an invisible frontier in pandemic surveillance." *The American journal of tropical medicine and hygiene* 103, no. 5 (2020): 1777.
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 Lawson, Becki, Silviu O. Petrovan, and Andrew A. Cunningham. "Citizen science and wildlife disease surveillance." *EcoHealth* 12 (2015): 693-702.
 Worsley-Tonks, Katherine EL, Jeff B. Bender, Sharon L. Deem, Adam W. Ferguson, Eric M. Fèvre, Dino J. Martins, Dishon M. Muloi et al. "Strengthening global health security by improving disease surveillance in remote rural areas of low-income and middle-income countries." *The Lancet Global Health* 10, no. 4 (2022): e579-e584.