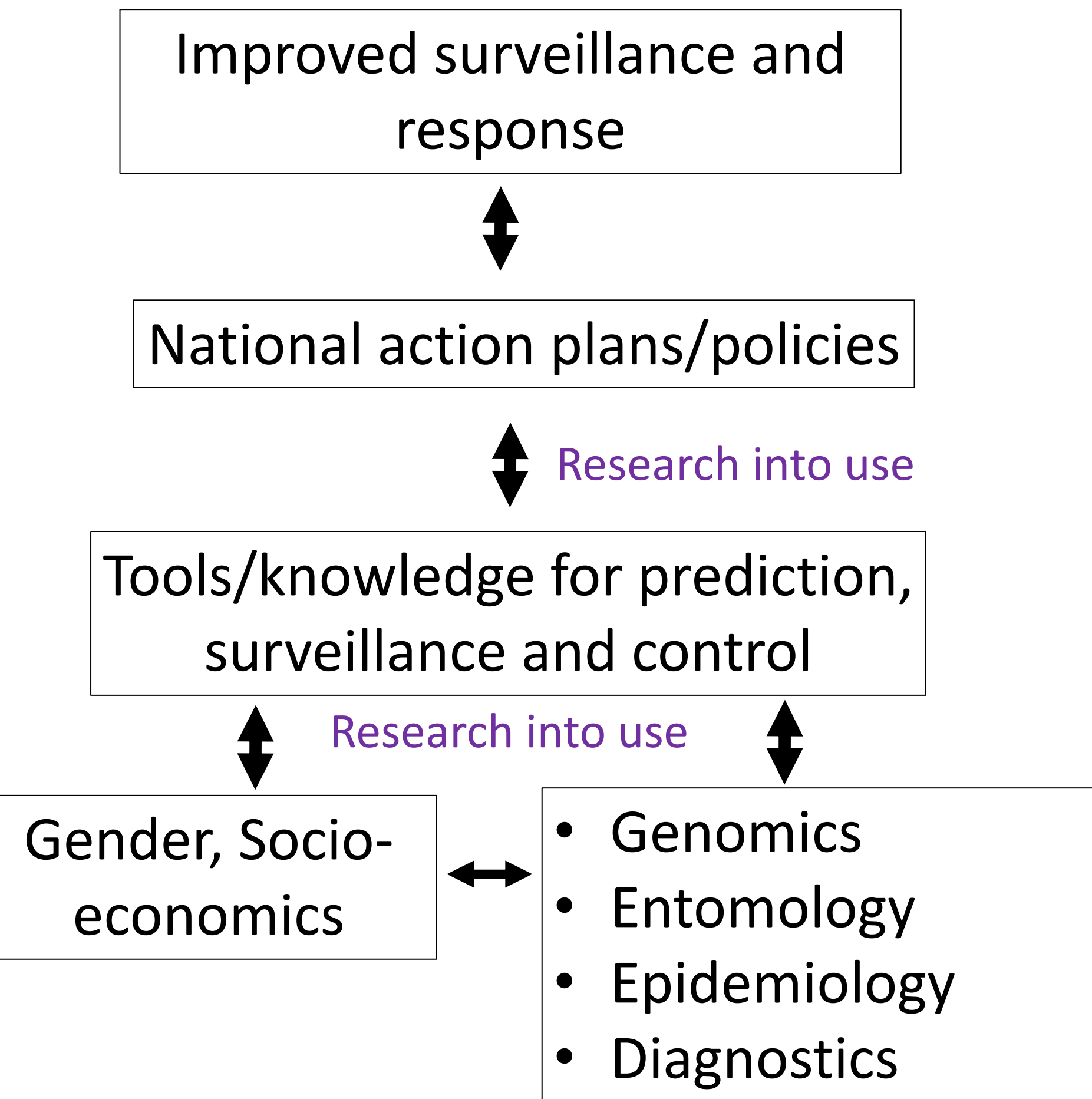## Context

RVF risk is expected to increase in the region with climate and land use change

The project aims to generate knowledge and tools that can support better surveillance and control of the disease in Uganda. Figure 1 demonstrates the proposed impact pathway.

Figure 1. Impact pathway

Improved surveillance and response
↕
National action plans/policies
↕ Research into use
Tools/knowledge for prediction, surveillance and control
↕ Research into use
Gender, Socio-economics ↔
- Genomics
- Entomology
- Epidemiology
- Diagnostics

Activities initiated (2019)

- Training of MAAIF personnel
- Screening of archived human samples at KEMRI
- Collation of historical data on RVF epidemics
- Recruitment and registration of graduate fellows

Scan to find out more

Boosting Uganda's investment in Livestock Development - RVF component
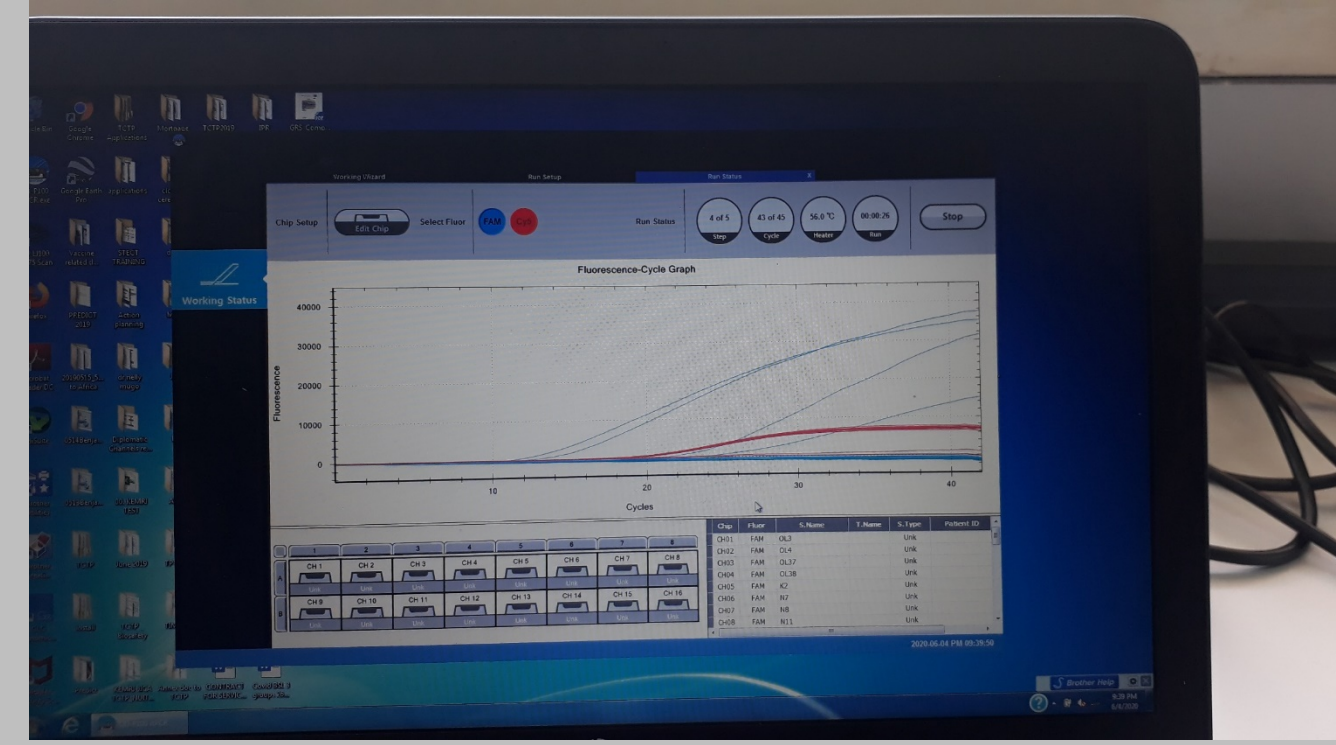
Major achievements

1. Genomics

Figure 2. RT-PCR results showing positive RVFV in some cell cultures [KEMRI]

- KEMRI commenced RVF virus isolation from archived serum samples from patients suspected to have had RVF in previous outbreaks in Kenya.

- To date, 50 samples have been inoculated in the African monkey kidney cell lines (Vero) cells; 7 of these were collected during the 1997/98 outbreak in 1 (Kajiado) district, 18 samples were collected during 2006/2007 outbreak in 3 districts, and 25 samples were collected during the 2018–19 outbreak in central Kenya. Twenty samples showing cytopathic effects have been screened using RT-PCR.

- A few samples (n = 3) from different outbreaks have been classified as being positive for RVF virus on RT-PCR as shown in Figure 2.
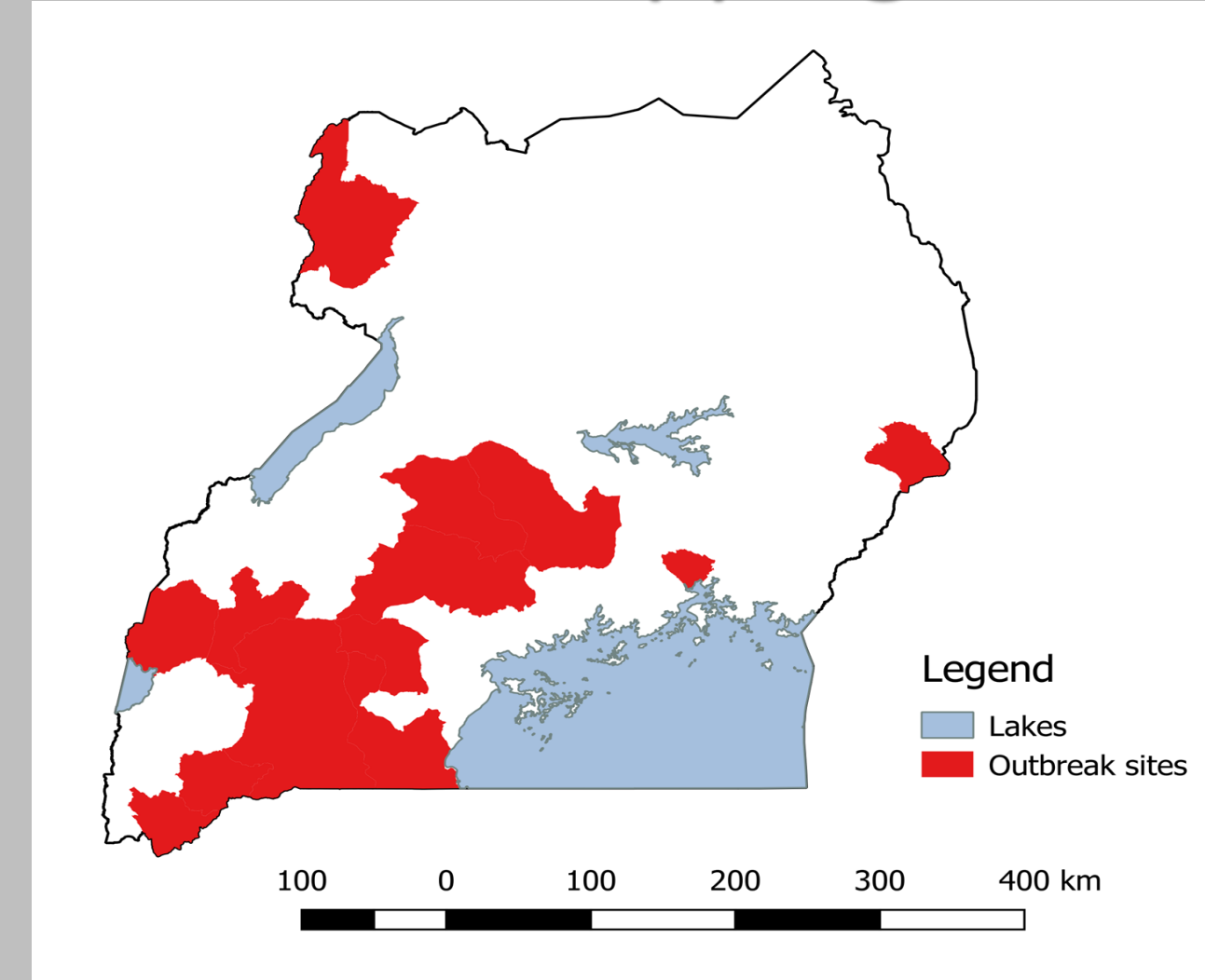
2. RVF risk mapping

Figure 3a. Districts affected by RVF outbreaks [MAAIF]

- MAAIF has compiled data on historical RVF outbreaks in the country, starting with the first outbreak that occurred in March 2016 (Figure 3a).
- MAAIF and ILRI conducted spatial analysis of sero-epidemiological data that were collected just before the project commenced.
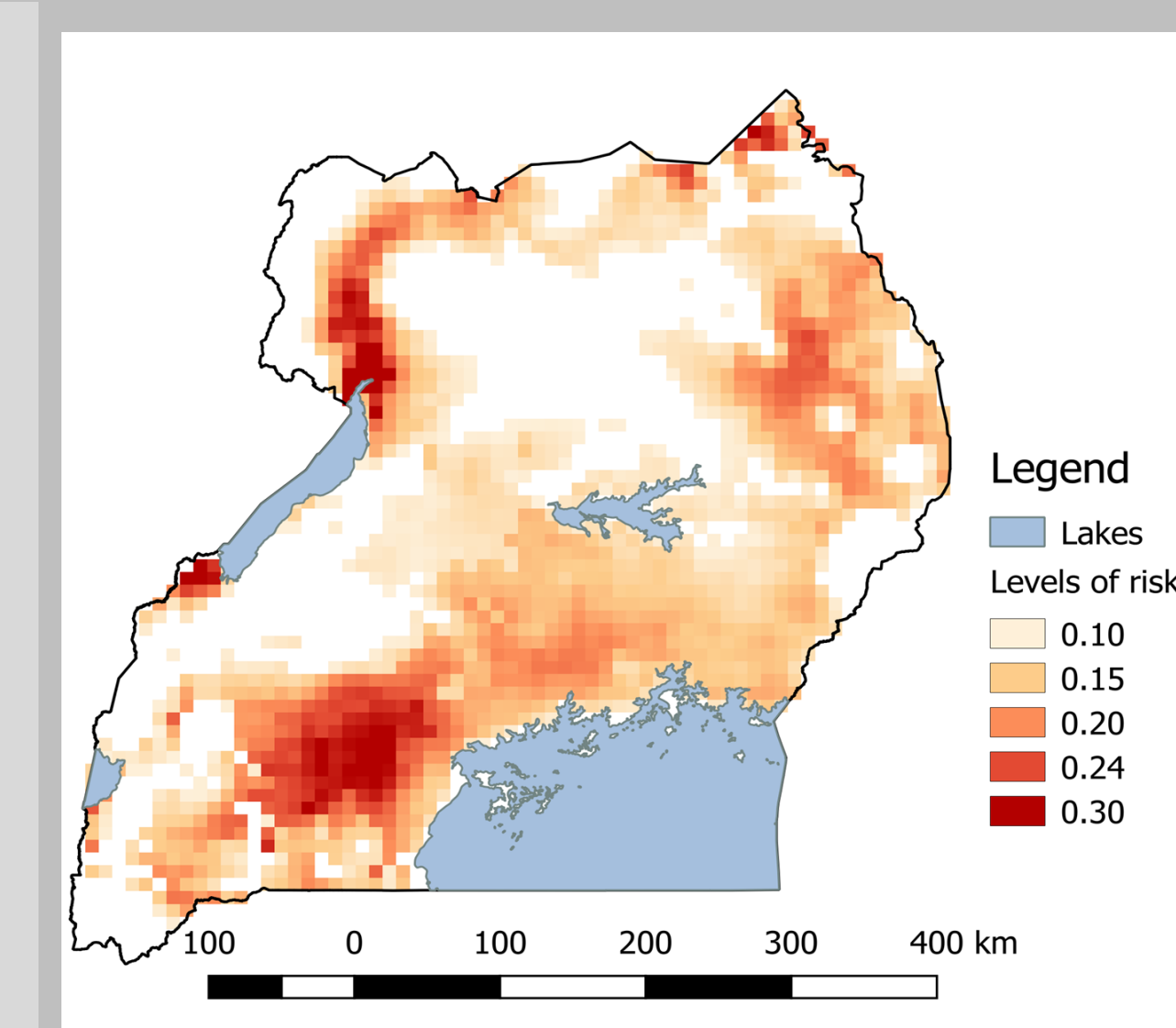- A draft a risk map generated is shown in Figure 3b.

Figure 3b. Predicted risk from national sero-prevalence survey

3. Vocational training

Figure 4a. Sampling and characterization of vectors of RVF [by MAAIF, NaLIRRI and KEMRI]

- MAAIF, NaLIRRI, KEMRI and ILRI trained 22 entomologists from 6 districts on sampling and characterization of RVF mosquito vectors (Figure 4a). Most of those trained had wealth of expertise on tick and tsetse sampling, but not mosquitoes
- VSF – Germany trained 36 veterinary field personnel from 12 districts on participatory disease surveillance. This will improve syndromic surveillance for RVF and other diseases such as PPR

Figure 4b. Training on participatory disease surveillance [VSF-Germany]

Challenges

- Inadequate research personnel: there is need for more scientists to support field research
- Delays on formalization of One Health partnerships
- Delays on accessing stored livestock samples in both countries

Future steps – Year 2

- Launch field activities as soon as travel restrictions imposed to manage COVID-19 are lifted
- Finalize statistical analyses on seroprevalence data
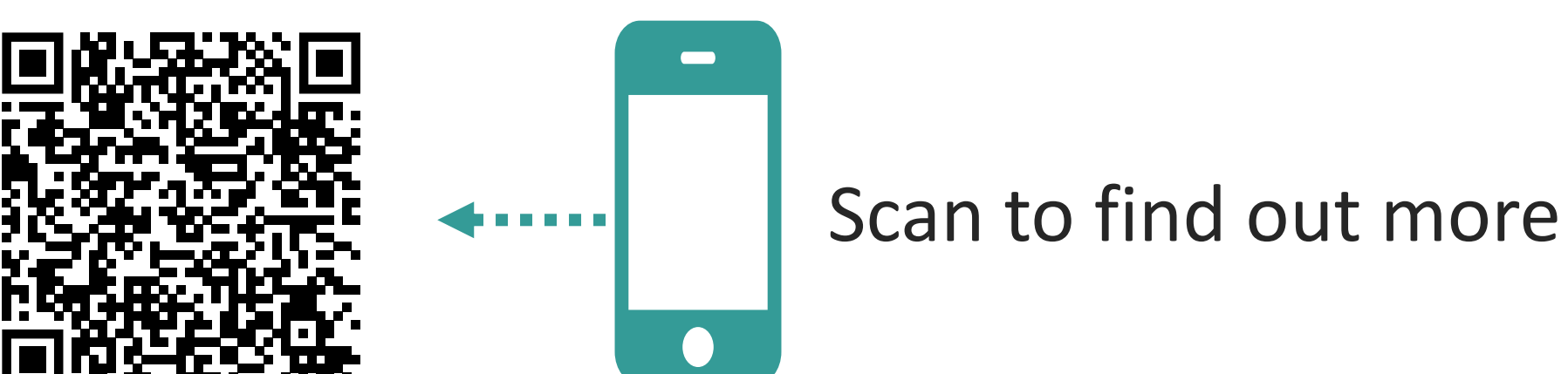
Outputs in CGSpace

- Draft RVF risk map
- Entomology training report
- PDS training report

Contact

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