Risk-Based Meat Safety Assurance Systems (RB-MSAS) – LMIC perspective

Warning - the presentation contains photos of animals which some people may find distressing!

Prof. Delia Grace[1,2] & Dr. Fred Unger[1]

1 International Livestock Research Institute, Kenya & Vietnam

2 Natural Resources Institute, UK

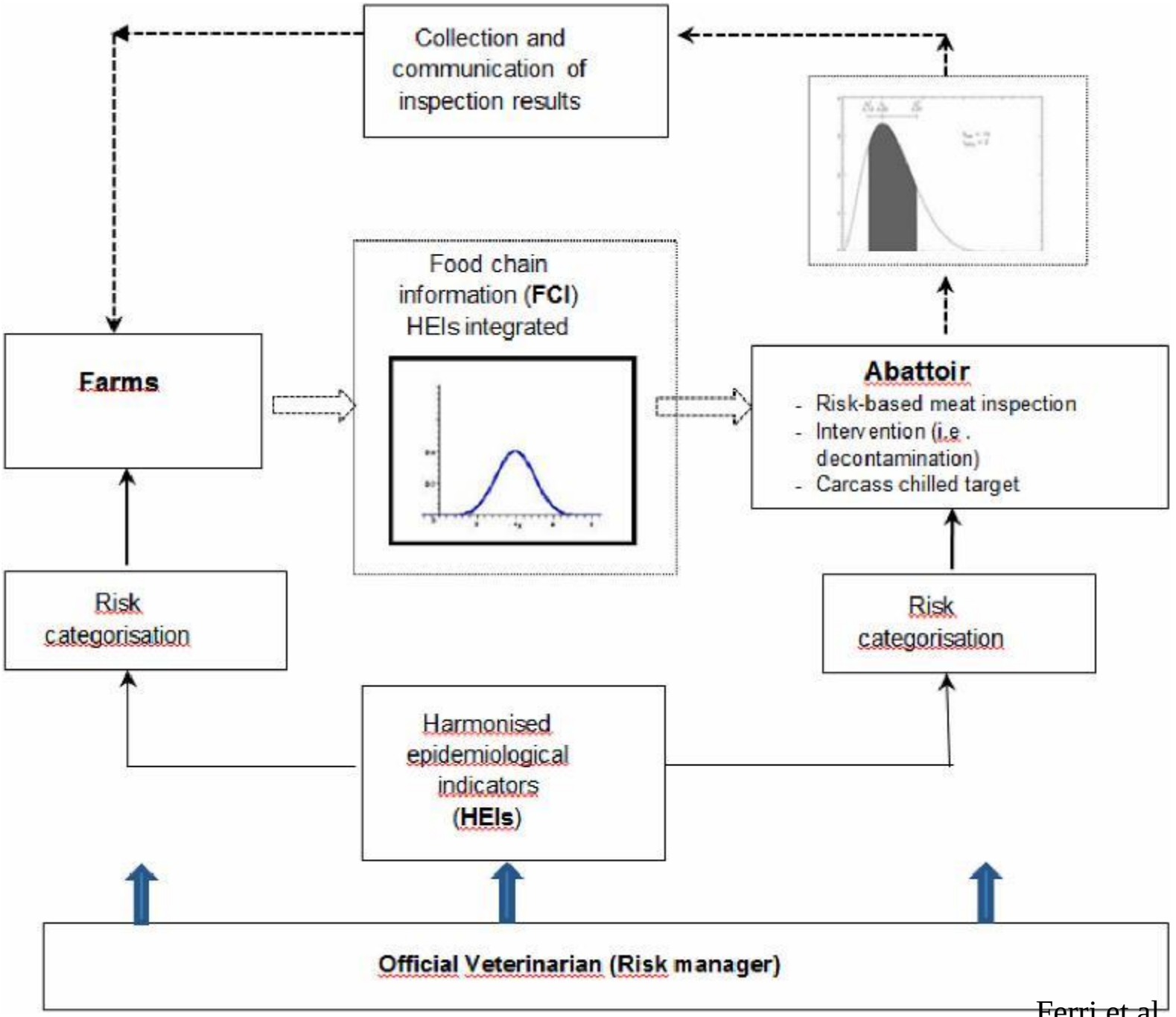
Safe Pork, New Orleans, 2023

Overview

The pork value chain in LMICs – different chains, different risks..

Risk-based approach to detecting novel pig diseases

Reflections



Ferri et al., 2023


GOOD FELING


Viva

Overview

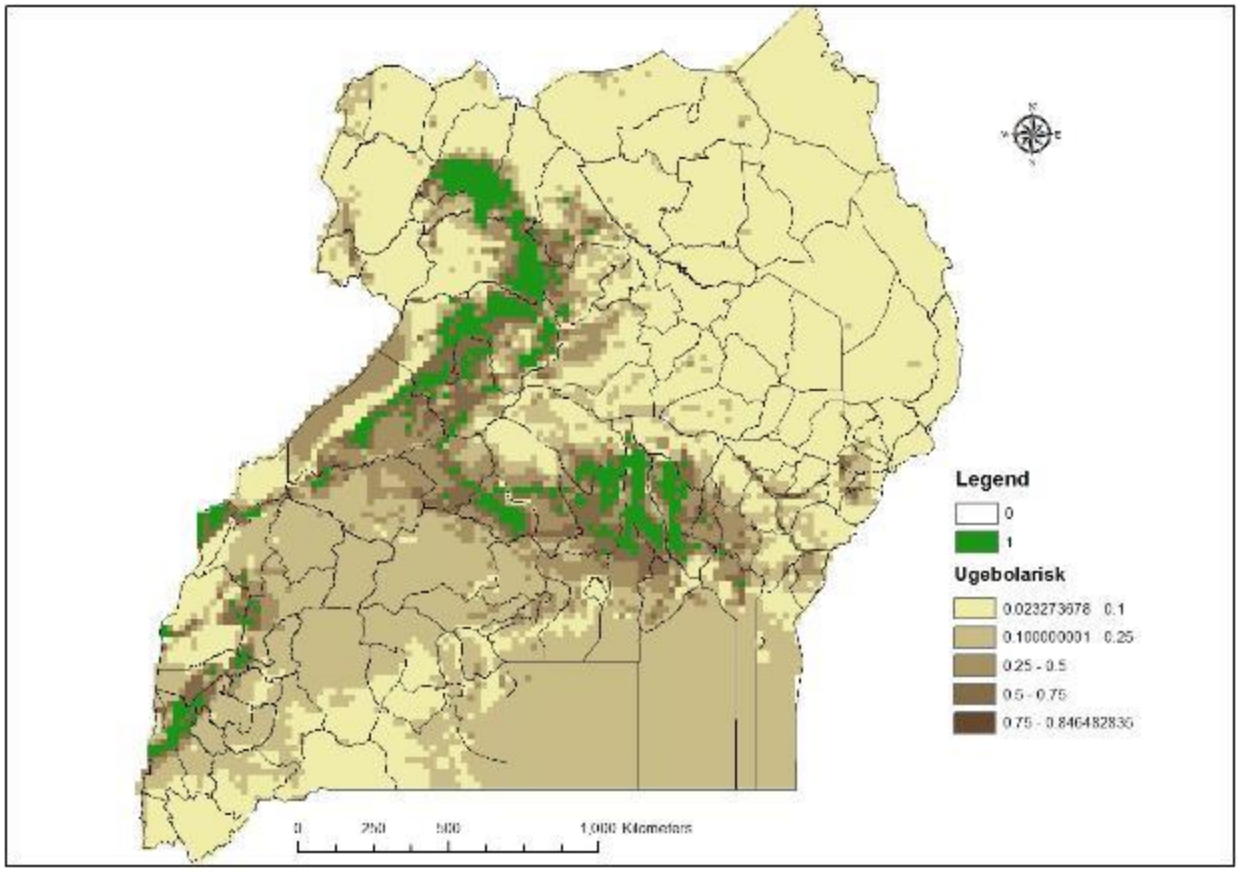
The pork value chain in LMICs – different chains, different risks..

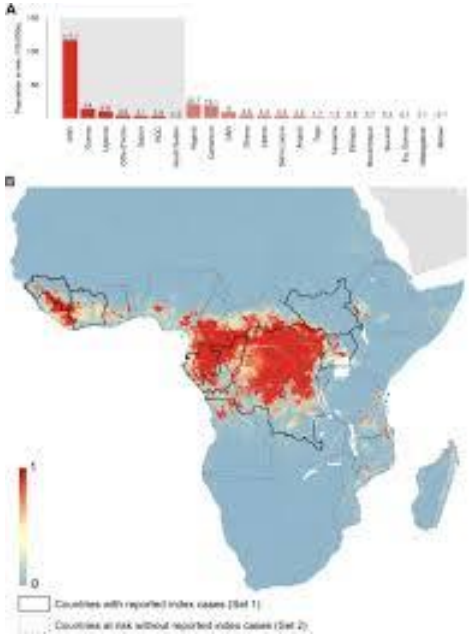
Risk-based approach to detecting novel pig diseases

Reflections

Methodology

Zoonotic niche for Ebola

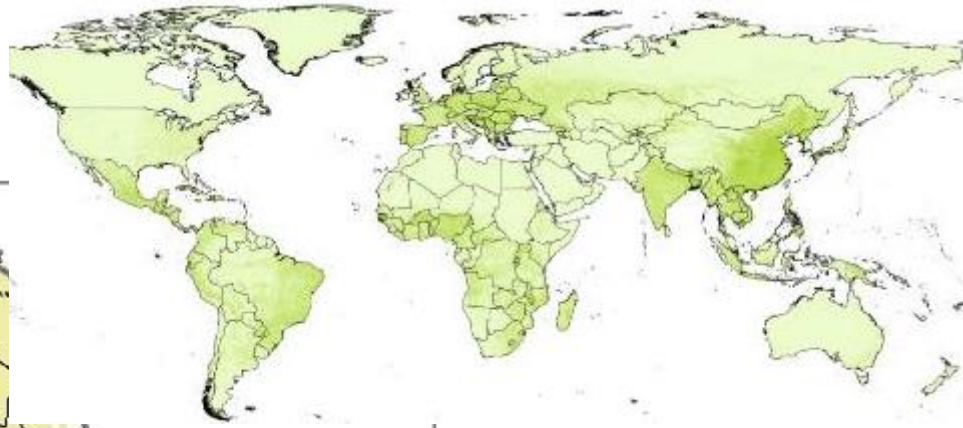


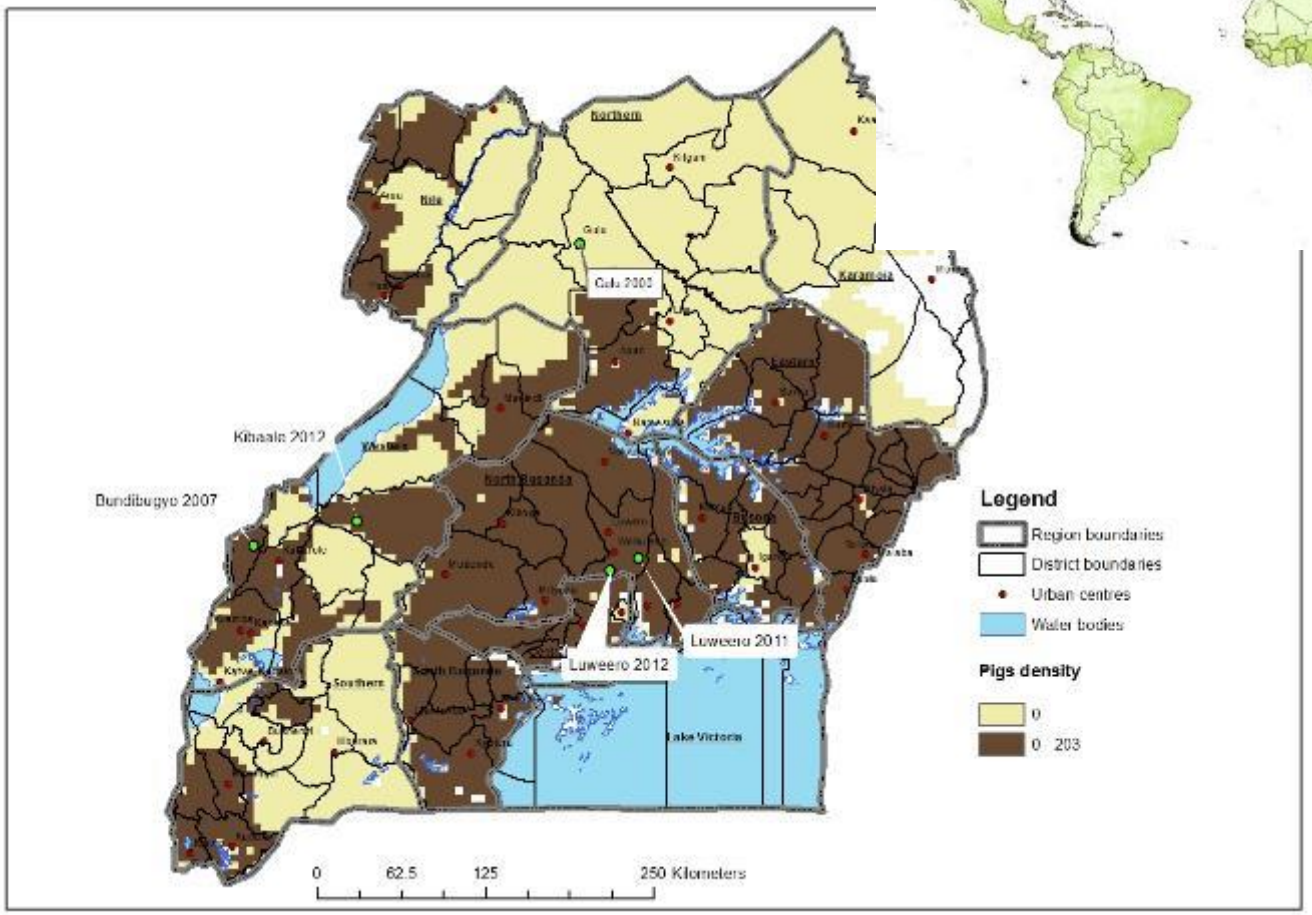


Suitable zoological niche for Ebola

5 x 5 km pixel

Methodology
Pig density



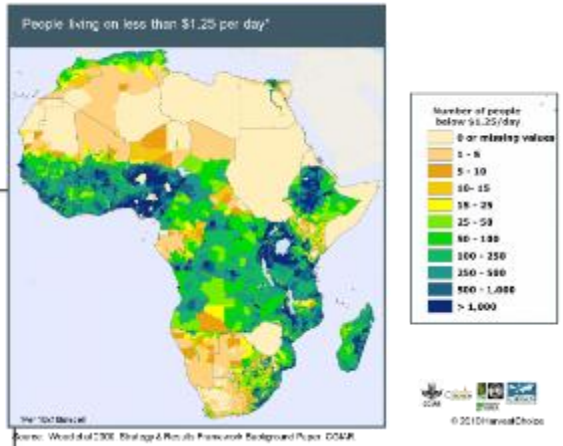


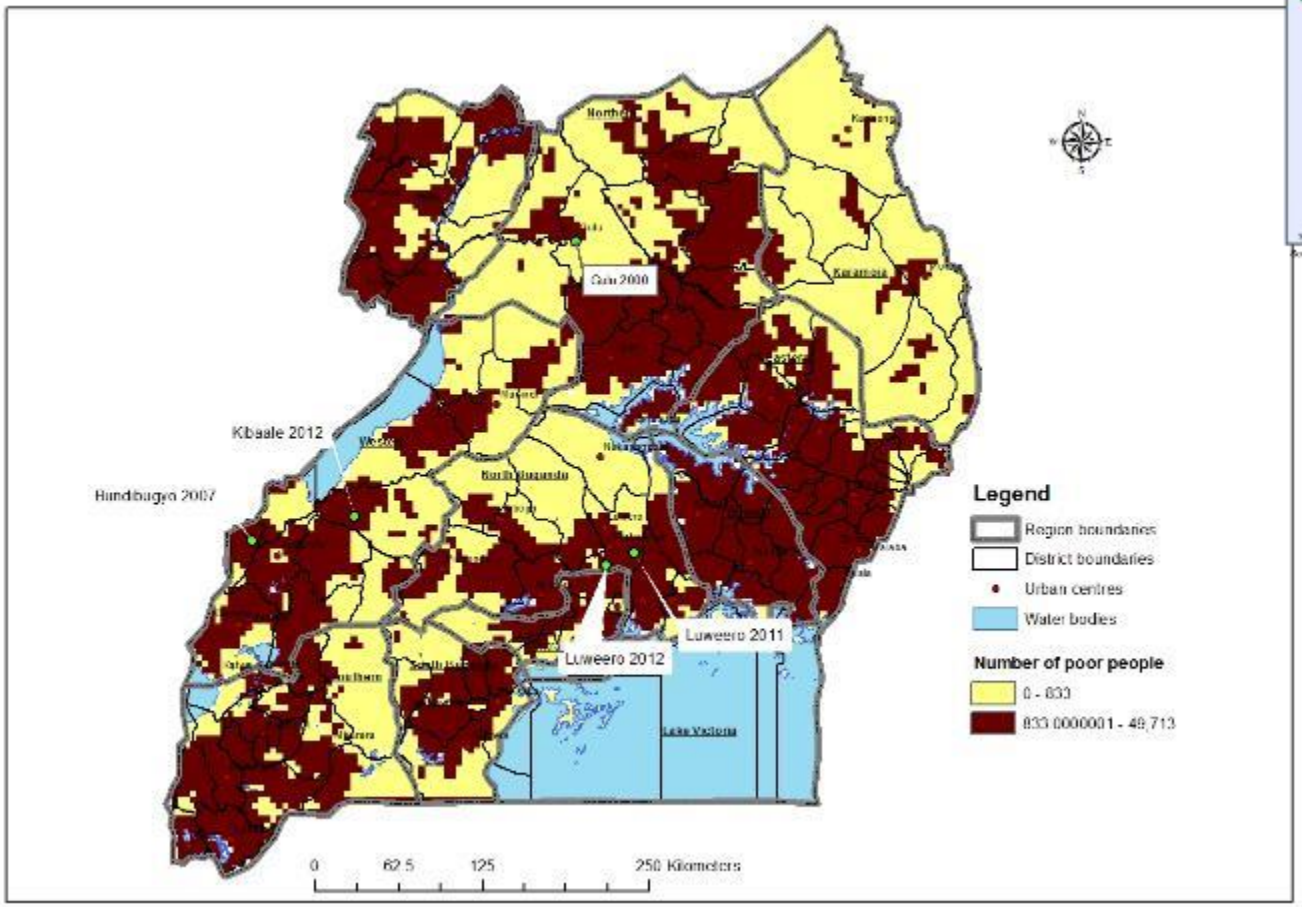
Pigs/square kilometre
1 x 1 km pixel

Gridded Livestock of the World 2.0 2010

Robinson et al 2014

Methodology
Poverty



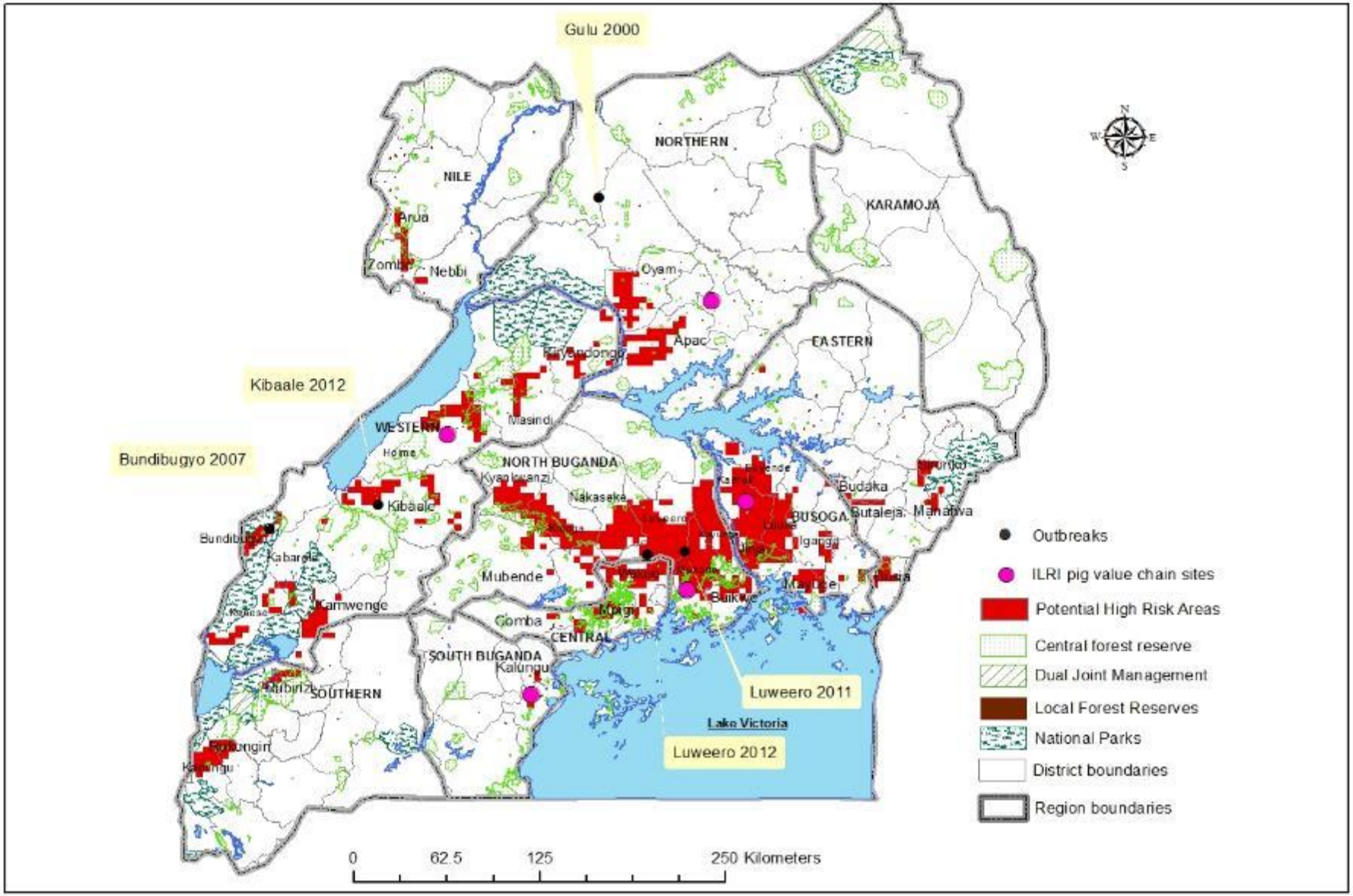


National/Sub national number of extreme poor (1.25USD/day) 10 x 10 km pixel

Harvest Choice 2010

Wood et al 2010

Results


Gulu 2000
Kibaale 2012
Bundibugyo 2007
Luweero 2011
Luweero 2012
NORTHERN
NILE
KARAMOJA
EASTERN
WESTERN
NORTH BUGANDA
CENTRAL
SOUTH BUGANDA
SOUTHERN
BUSOGA
Arua
Nebbi
Oyam
Apac
Masindi
Kibaale
Kabarole
Kamwenge
Mubende
Gomba
Kalungu
Rukungiri
Budaka
Butaleja
Manafwa
Iganga
Mayuge
Lake Victoria
Outbreaks
ILRI pig value chain sites
Potential High Risk Areas
Central forest reserve
Dual Joint Management
Local Forest Reserves
National Parks
District boundaries
Region boundaries
0
62.5
125
250 Kilometers

Sampling design

Large area (square kilometres) of high risk present in the district

AND

Adequate numbers of pigs (over 40, 360 average pig herd size OR pig density > 8 pigs/km2)

AND

One of these potential risk factors:

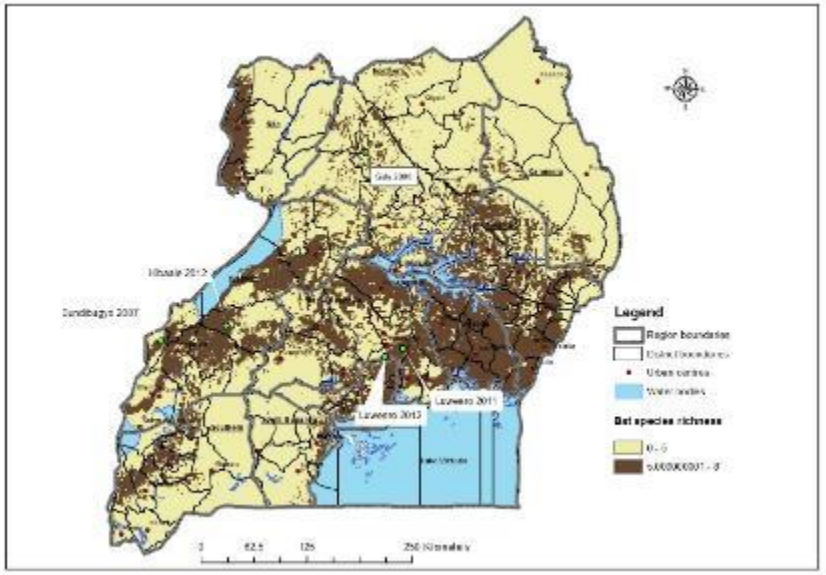
Large numbers of people in extreme poverty in the district (>124, 000 people per 10 km2)

OR

High bat species diversity in the district (over 5)

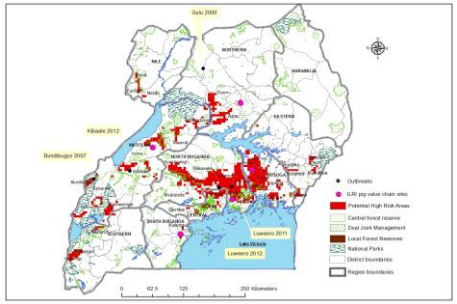
OR

Presence of central forest reserves (CFR) of ecological or biodiversity significance



Bat species richness?

Data provided by Jakob Fahr and Matthias Herkt, Max Planck Institute, Germany



Transboundary and Emerging Diseases

Transboundary and Emerging Diseases

REVIEW ARTICLE

Assessing the Potential Role of Pigs in the Epidemiology of Ebola Virus in Uganda

C. Atherstone[1], E. Smith[1], P. Ochungo[2], K. Roesel[1] and D. Grace[2]

[1] International Livestock Research Institute, Kampala, Uganda
[2] International Livestock Research Institute, Nairobi, Kenya

Keywords:

Summary

Reflections

Greater need for RB-MSAS in LMIC

More pay-off (CE) (further presentations)

Less technical capacity

More bureaucratic inertia

Acknowledgements

This presentation and the research featured in it was funded by the One Health Centre in Africa (OHRECA), Australian Centre for International Agricultural Research (ACIAR), and the CGIAR One Health Initiative among other donors