

One Health and Vector-Borne Diseases Webinar Series (Webinar #1)

South Africa/Rwanda Project

Project Title: Application of One Health approach for reducing the burden of vector-borne diseases in vulnerable communities in the context of climate change



South Africa



Rwanda



Presenters: Prof Moses J Chimbari

First, middle and last name	Gender identity (W / M/ NB/ O)	Institution name	Expertise	Role in the project
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John J O Mogaka	M	University of KwaZulu-Natal	Implementation Research, OneHealth, Project Management, Quantitative Modelling, Vulnerability Assessment	Co-PI
Sinegugu E Duma	F	University of KwaZulu-Natal	Qualitative Research, Nursing, Community Engagement, Research supervision	Co-PI
Chester Kalinda	M	University of Global Health Equity	Biostatistics, Plant science, Research methods	Researcher
Anselme Shyaka	M	University of Global Health Equity	Veterinary Medicine, Microbiology, parasitology, OneHealth	Researcher
Simbarashe Chitanga	M	University of KwaZulu-Natal	Veterinary Medicine, Spatial eco-epidemiology modelling	Researcher
Maria Albin Qambayot	F	University of Global Health Equity	Environmental Health, Training and Education, Monitoring & Evaluation	Researcher
Tafadzwa Mindu	M	University of KwaZulu-Natal	Research Uptake, Knowledge Translation, Field Data Collection	Researcher
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Tawanda Manyangadze	M	University of KwaZulu-Natal	Public Health, Diseases modeling, Ecological modelling, Disaster risk and vulnerability assessment	Researcher
Nkeka Peter Tseole	M	University of KwaZulu-Natal	Social Scientist, Population Issues, Community Engagement	Researcher

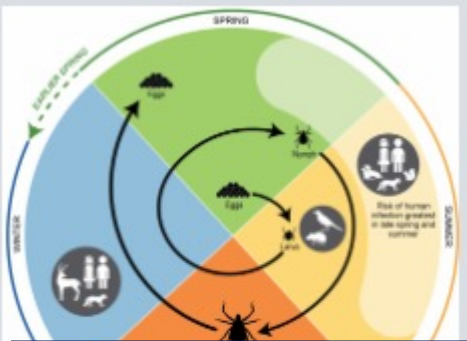
Project Background



- CC is already having an impact on VBD transmission and spread, and the effects are expected to worsen.
- Efforts must be stepped up to prevent and control VBDs in the face of CC

- Some high-profile disease incidences have exposed **gaps in knowledge** and **response efforts** towards emergent diseases due to CC
- Limited work done to assess the **climate readiness** of most public health systems in terms of **local and national** response planning and adaptation measures in the prevention and control of VBDs.
- There are promising indications that managing VBD threats related to CC may be best addressed by operationalizing and implementing the **One Health (OH) approach**.
- A number of approaches developed to implement OH do not provide opportunities for comparing different settings or determining the correlational influence of OH implementation processes on intervention outcomes.

Project Purpose



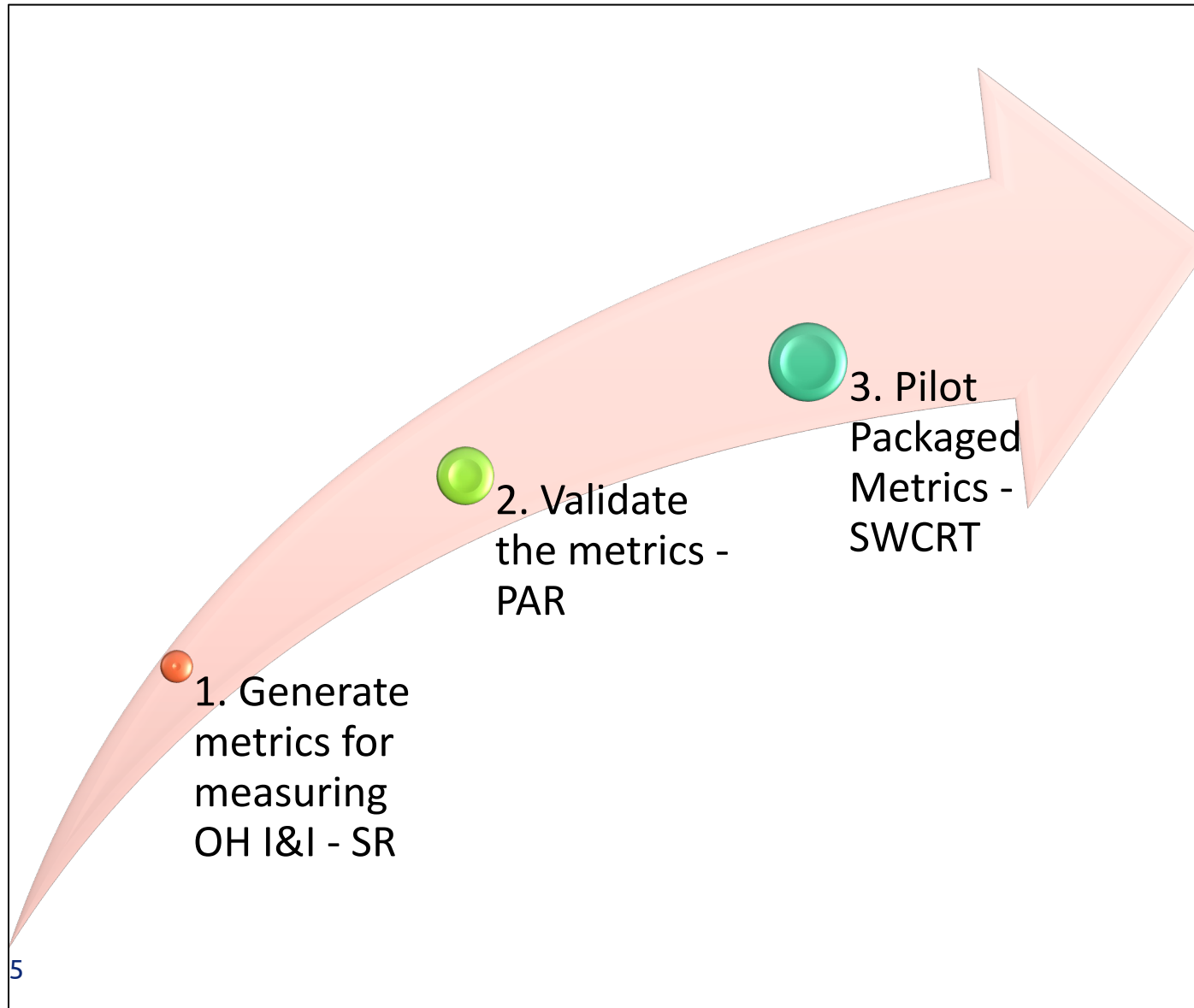
- KwaZulu-Natal Ecohealth Program (KEP), with help from partners such as TDR-IDRC, has been involved in research initiatives on VBDs and CC
- KEP's experience has shown the need for development of:
 - metrics-based, step-by-step operationalization guidelines for quantitative evaluation of OH implementation as multicomponent

Aims

1. **develop metrics** for the evaluation of OH-based schistosomiasis prevention and control projects
2. develop a step-by-step **OH implementation guide** relevant for the prevention and control of schistosomiasis
3. investigate the **moderating effects of intervention delivery timings and context settings** (study sites) on implementation success relevant for the prevention and control of schistosomiasis
4. establish a **collaborative platform** that strengthens **partnerships** among African scientists and research institutions in the field of OH implementation for prevention and control of VBDs

**ALL IN CONTEXT OF CC AMONG
VULNERABLE COMMUNITIES**

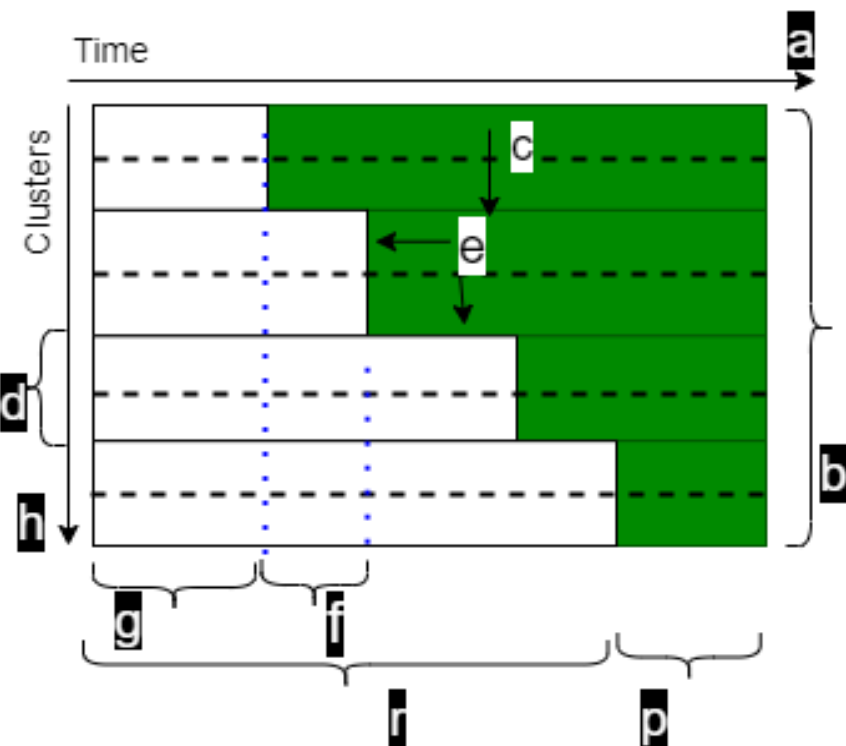
Methodological Overview



The study is informed by both **secondary** (SR) and primary data acquired through Participatory Appraisal Research (PA), Household Surveys, Protocol Checklists from research teams, and observation techniques.

- The stepped wedge cluster randomized control study aims to evaluate the effectiveness and feasibility of OH implementation metrics
- Carried out at 4 study sites, 2 each in Rwanda and South Africa.
- Participation determined based on VI

Methodology

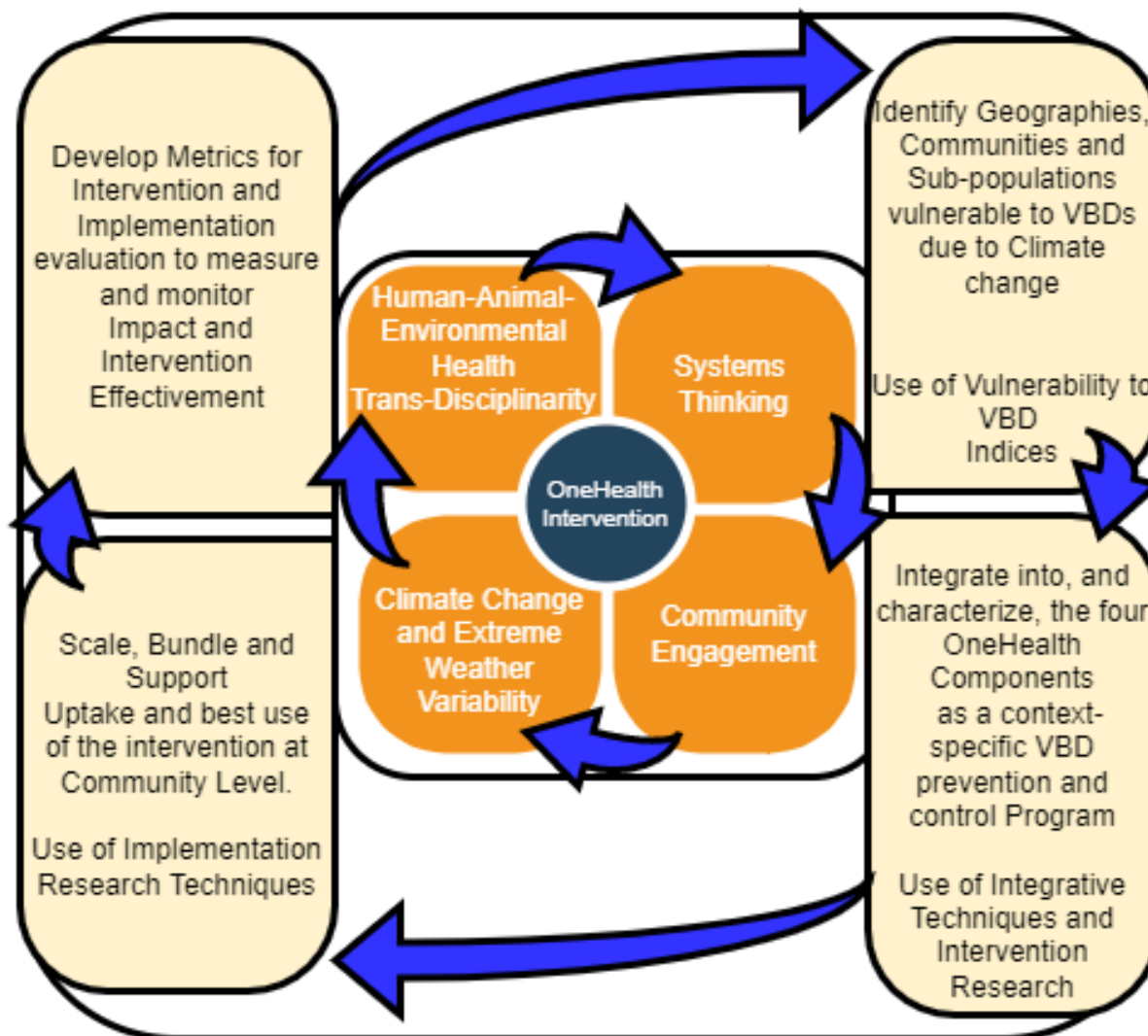


Key:

a=Duration of Trial; b=Number of Groups
 c=Cross-Over Point; d=Number of Clusters in a Group
 e=Step; f=Time between Cross-over points
 g=Pre-Roll-out Period; h= Total number of Clusters
 r= Roll-out Period; p=Post Roll-out Period

= Intervention Phase/Exposure = Control Phase/Control

= OneHealth Intervention Components = OneHealth Intervention Implementation Components



Characteristics and components of the proposed stepped-wedge cluster randomised controlled study intervention and Implementation

The intervention emphasizes the relatedness of the human, animal, and environmental health and the importance of transdisciplinary efforts

Objectives & Deliverables/Outcomes

Objectives

i. To develop metrics for the evaluation of OH-based schistosomiasis prevention and control projects in the context of climate change among vulnerable communities

ii. To develop a step-by-step OH implementation guide relevant for the prevention and control of schistosomiasis in the context of climate change among vulnerable communities

iii. To investigate the moderating effects of intervention delivery timings and context settings (study sites) on implementation success relevant for the prevention and control of schistosomiasis in the context of climate change among vulnerable communities in Africa

iv. To establish a collaborative platform that strengthens partnerships among African scientists and research institutions in the field of OH implementation related to the prevention and control of VBDs in the context of climate change among vulnerable communities in Africa.

Deliverables & Outcomes

Deliverable 1:

Metrics for quantitative evaluation of schistosomiasis prevention and control in the context of climate change among vulnerable communities in Africa

Outcome 1.1 Community engagement for common understanding of metrics for evaluating schistosomiasis prevention and control projects

Outcome 1.2 Synthesized country-specific metrics-based mechanism for evaluating OH-based schistosomiasis prevention and control projects

Major Outcome1: Community-validated metrics for quantitative evaluation of schistosomiasis prevention and control projects in the context of climate change.

Deliverable 2:

A ToC-informed step-by-step implementation evaluation guide relevant for the prevention and control of schistosomiasis in the context of climate change among vulnerable communities in African settings.

Outcome 2.1 Adoption of OH implementation evaluation guidelines relevant for the prevention and control of schistosomiasis in the context of climate change at country level

Outcome 2.2 Integrated and coordinated OH implementation evaluation guide relevant for the prevention and control of schistosomiasis in the context of climate change at country level

Major Outcome2: Country-level adoption and coordination of ToC-based step-by-step schistosomiasis prevention and control implementation evaluation guide.

Deliverable 3:

A validated model showing the moderating effects of intervention delivery timings and context settings (study sites) on implementation success for the prevention and control of schistosomiasis in the context of climate change among vulnerable communities in Africa

Outcome 3.1 Metrics for evaluating intervention delivery timing to inform a monitoring and evaluation (M&E) framework of schistosomiasis prevention and control projects

Outcome 3.2 Metrics for evaluating intervention context settings to inform a monitoring and evaluation (M&E) framework of schistosomiasis prevention and control projects

Major Outcome3: A community validated model showing the moderating effects intervention delivery timings and context settings (study sites) on implementation success for the prevention and control of schistosomiasis in the context of climate change

Deliverable 4:

A unique continental network of scientists and research institutions advancing the field of OH implementation related to the prevention and control of VBDs in the context of climate change among vulnerable communities in Africa

Outcome 4.1 A web-based coordination platform developed for information/knowledge sharing, communication and dissemination of OH research results.

Outcome 4.2 Training platform on OH for capacity building

Major Outcome4: A unique continental network of scientists and research institutions advancing the field of OH implementation.

Progress so far



- Converted Proposal to Study Protocol
- Ethics Application – Rwanda, South Africa and WHO
- Planning for Training
- (Re)-establishing study area and community contacts
- Fortnight joint WHO-SA/RW Catch-Up Meetings

Challenges



- Funding for Rwanda Ethics Application – done through pre-funding while awaiting funds
- Logistics and funding modalities for bringing the team together for training

Acknowledgments



- WHO for funding
- WHO project management team
- South Africa/Rwanda Consortium
- Program consortium members – other projects