An aerial photograph of a city, likely in Africa, showing a mix of residential buildings, green spaces, and a few taller commercial buildings in the distance. A white rectangular text box is overlaid on the left side of the image.

Building a broader approach to mosquito management across the built environment

Michael Macdonald, Sc.D.

Policy Framework

Global framework for
the response to malaria
in urban areas



Health
ation

Africa

REGIONAL COMMITTEE FOR AFRICA

Seventy-second session
Lomé, Republic of Togo, 22–26 August 2022

Agenda item 10

**FRAMEWORK FOR THE INTEGRATED CONTROL, ELIMINATION AND
ERADICATION OF TROPICAL AND VECTOR-BORNE DISEASES
IN THE AFRICAN REGION 2022–2030**

Report of the Secretariat



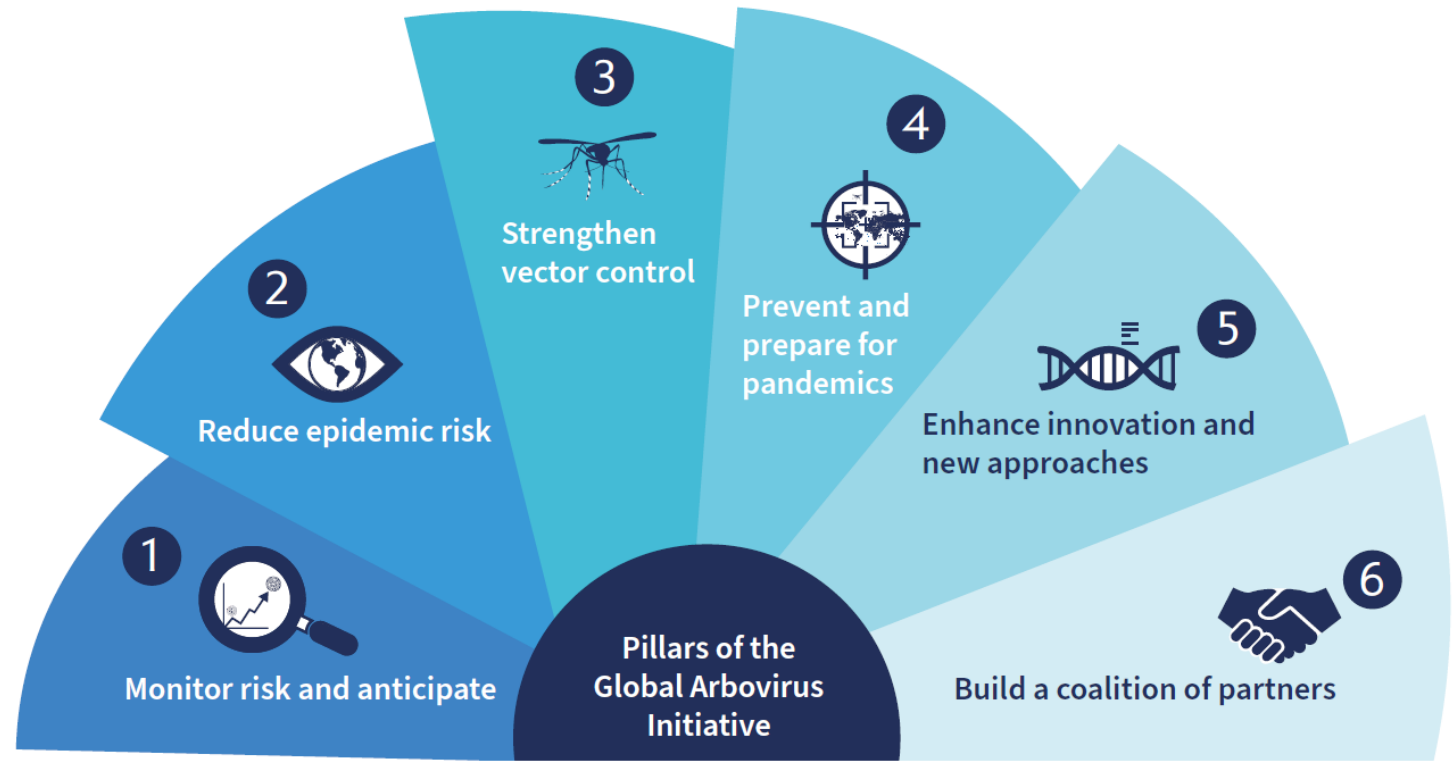
GLOBAL ARBOVIRUS INITIATIVE

Preparing for the next pandemic:
tackling mosquito-borne viruses with
epidemic and pandemic potential



2023–2025

A joint initiative of the WHO Health Emergencies programme, the Department of Control of Neglected Tropical Diseases and the Department of Immunization, Vaccines and Biologicals



3: Establish institutional training and technical support networks; Establish devolved vector control services, with intersectoral support

5: Improve methods for generating evidence from combined interventions (e.g vector control) for which “gold standard” RCTs cannot be conducted.

Strategic Engagement with Private Pest Management Associations



Greater Chennai Municipal Corporation vector control services for dengue, malaria, JEV



finer for
mosquito breeding
on property

Urban Agriculture and Farmer Field Schools

Larval recognition and control; pesticide and resistance management



Microfinance/remittance for incremental housing improvements

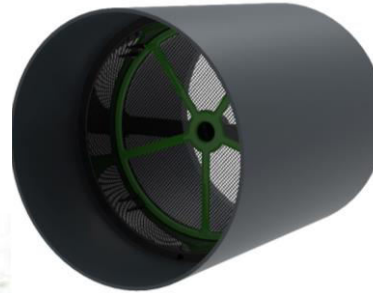


MAKAZI BORA:

Two Years of Piloting Housing Microfinance
in
TANZANIA



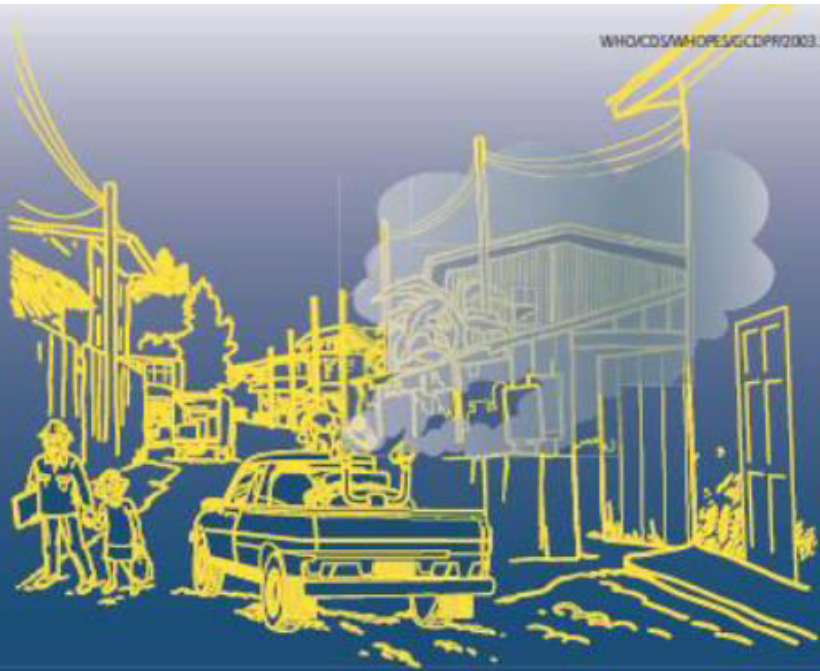
Odufuwa
(2022)



Snetse laar
(2017)



Lindsay
(2019)



Space spray application of insecticides for vector and public health pest control

A practitioner's guide

Communicable Disease Control, Prevention and Eradication
WHO Pesticide Evaluation Scheme (WHOPEs)



World Health Organization
Geneva

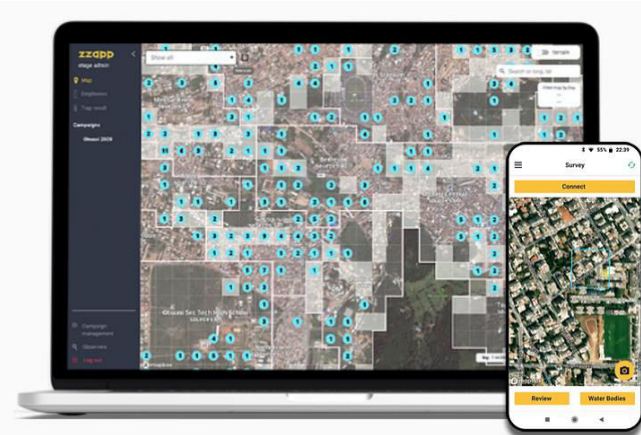
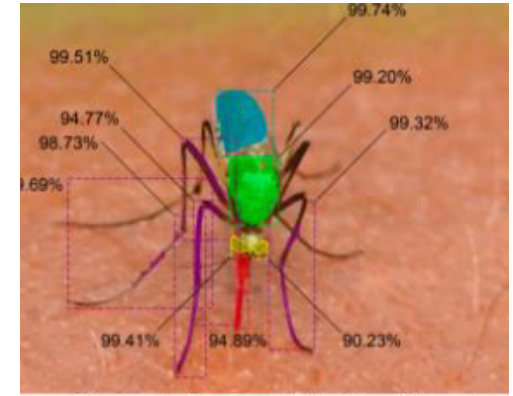
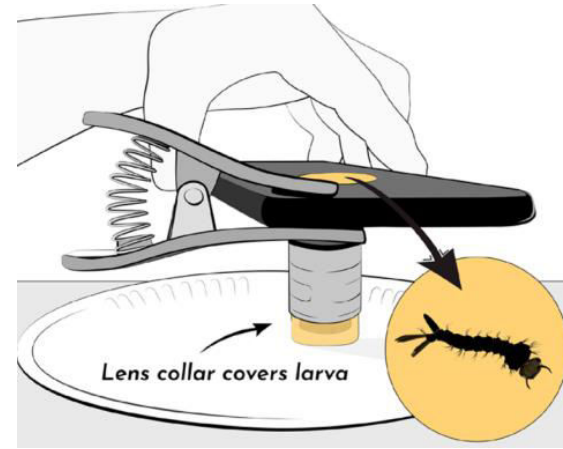
Space Spray

Everyone does it; most poorly

- Currently not recommended for malaria, poor cost-effective evidence for *Aedes*
- Urgent need to improve Quality Assurance:
 - Pesticide choice, droplet size calibration, time and route of application
 - Post-spray mosquito monitoring

Technology for larval surveillance and control

- Citizen science
- info management (ZZAPP)
- Wide Area Larviciding
- UAS for remote sensing and larvicide delivery



Building a broader approach to mosquito management across the built environment

Strategic Opportunities

- Breaking down silos between NTD and Malaria
- Private Pest Control Associations
- Tax-base municipal programs
- Farmer Field Schools
- Microfinance and remittance for housing improvements

Tactical Opportunities

- Improved QA for Space Spray to make less cost-inefficient
- Technology improvements for larval source management
 - Citizen science and ICT
 - Wide Area Larviciding
 - UAV for targeting and delivery