TDR STRATEGY IN VECTOR CONTROL:
Past achievements
On-going projects
Future opportunities/challenges

RBM VECTOR CONTROL WORKING GROUP (VCWG)
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WHAT IS THE PURPOSE OF TDR?

OUR VISION
The power of research and innovation will improve the health and well-being of those burdened by infectious diseases of poverty.

OUR MISSION
To foster an effective global research effort on infectious diseases of poverty and promote the translation of innovation to health impact in disease endemic countries.
TDR REPOSITIONING IN HEALTH RESEARCH

Knowledge management

Innovation
Discovery/development
Bench
Research-driven

Validation
Evidence for what works
Field

Application
Integration into health service
Systems
Systems-driven

Capacity building

TDR REPOSITIONING IN HEALTH RESEARCH
VES PARADIGM

Diseases (and vectors) occur within a context.

Environment and society have major influences on disease transmission.

OUR IMPACT GOAL
Communities have enhanced access to improved control interventions that ultimately contribute to decreased transmission and disease burden.
HOW DO WE DO THIS?

• **Promote research** for a better understanding of the complex interactions influencing vector-borne disease transmission and control.

• **Build capacity** in under-resourced countries to conduct this research.

• **Collaborate** with countries and institutions – the work is done in these countries, by the scientists and communities.
TIMELINES AND MILESTONES OF TDR INVOLVEMENT IN MALARIA VECTOR CONTROL

1989 Diagnostic monoclonal antibody-based (Zavala) test for species-specific detection of sporozoites in mosquitoes in disease control use.

1991 New initiative launched to develop new control strategies for malaria by genetic engineering of mosquito to interrupt transmission.

1996 Final results of large field trials of insecticide-treated bednets involving 400,000 people in Ghana, Burkina Faso, Kenya and The Gambia demonstrate that insecticide-treated bednets could reduce overall childhood mortality by around 20%.

1998 Home management of malaria approach adopted as a strategy by WHO.

2002 Genome sequencing of *Anopheles gambiae* completed by TDR-fostered consortium.

2006 Partnerships for malaria control: engaging the formal and informal private sectors.

2014 Guidance framework for testing genetically modified mosquitoes.
CURRENT PROJECTS

• Reducing vulnerabilities and increasing resilience in Sub-Saharan dryland populations to the risks of climate change

• Improving implementation and scale-up of dengue vector control in urban areas

• Using social entrepreneurship principles to increase access to health products

• Investigating the mechanisms of malaria vector resistance to insecticides and the link between this and control failure.

• Integrated community case management -- strategies for community health workers and fever management
ON-GOING ACTIVITIES IN MALARIA VECTOR CONTROL

Five major African research projects looking at changes in land use, dams, vector distribution and water availability, and how these changes affect diseases experienced by a range of communities.

Malaria, human African trypanosomiasis, Rift Valley fever and schistosomiasis are being studied in the United Republic of Tanzania, Botswana, South Africa, Zimbabwe, Kenya, Mauritania and Côte d’Ivoire.

Study to assess the effect of insecticide resistance mechanism(s) on malaria vector control tools in Mali, Benin and Nigeria in different settings LLINs and/or IRS. Activities include compiling existing data on insecticide resistance and detection of underline resistance mechanisms. Ownership and utilization of LLINs and IRS and community perceptions will be investigated followed with assessment of entomological, and parasitological parameters in areas with and without insecticide resistance.
DIVERSITY OF MALARIA IN CLOSE SETTINGS

Vector control ??

Vector control YES
WORK PLAN THROUGH 2017

- ENVIRONMENTAL CHANGES
- EMERGING CHALLENGES
- SOCIAL AND COMMUNITY DYNAMICS
- GENDER EQUITY

SUSTAINABLE HEALTH

Ethics, Capacity, Collaboration
MALARIA RELATED PROJECTS

- Resilience to climate change in Africa (2012-2016)
- Alternative methods for controlling vectors (2015-2016)
- Insecticide resistance and malaria (2012-2016)
- Distance learning course on vectors and vector-borne diseases for Low- and Middle- Income Countries (2015-2016)

External partners and funders

WHO-HQ, GMP, NTD, PHE

IDRC-Canada

WHO RO AFRO, PAHO, SEARO

RBM
HOW CAN WE WORK TOGETHER?

Does any of this support your efforts?

Are there projects you are planning or working on that could benefit from our support?

Do you have ideas for projects that we could plan together?