RBM Partnership To End Malaria

Vector Control Working Group

17th April 2024

Joint meeting of VCWG and MSWG

Updates from Vector Control Working Group

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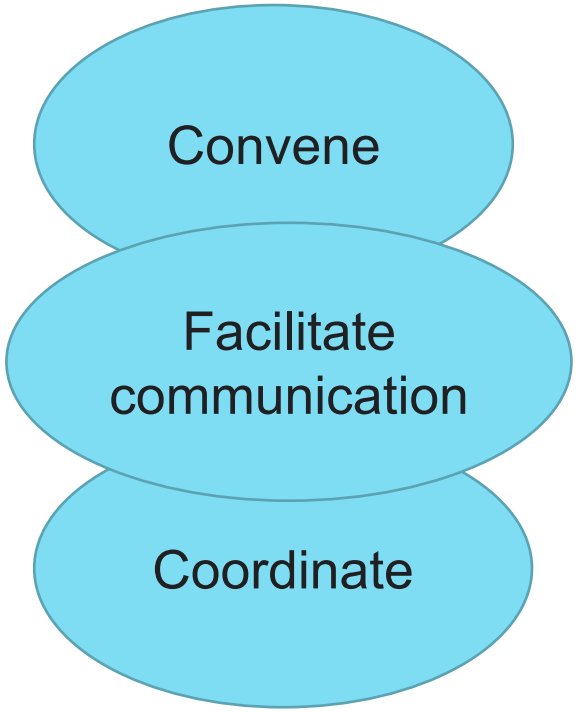
The sponsorships of selected malaria-affected country participants are kindly funded by the Swiss Agency for Development and Cooperation (SDC) through the GlobMal, Phase 4 project at Swiss TPH, the RBM Secretariat and contributions received from the Organizations participating at the Exhibition Fair. We are grateful.

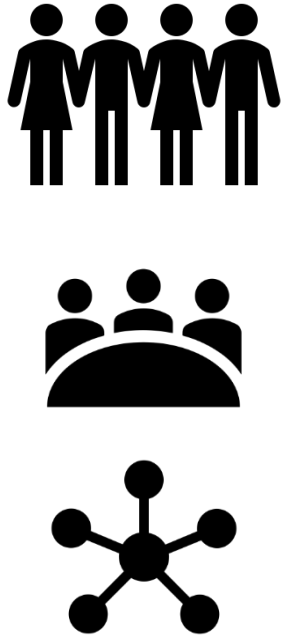
https://endmalaria.org/our-work-working-groups/vector-control

Objectives of the RBM – Vector Control Working Group

Purpose:
- To align RBM partners on best practices to reach and maintain universal coverage with effective vector control interventions.
- To support the implementation of Vector Control Guidance generated by WHO and to galvanise efforts towards achieving specific country and global malaria elimination targets.

MEMBERS
- National programs
- Product manufacturers
- Academia
- Implementers
- Policy makers
- Multi-laterals
- CSOs

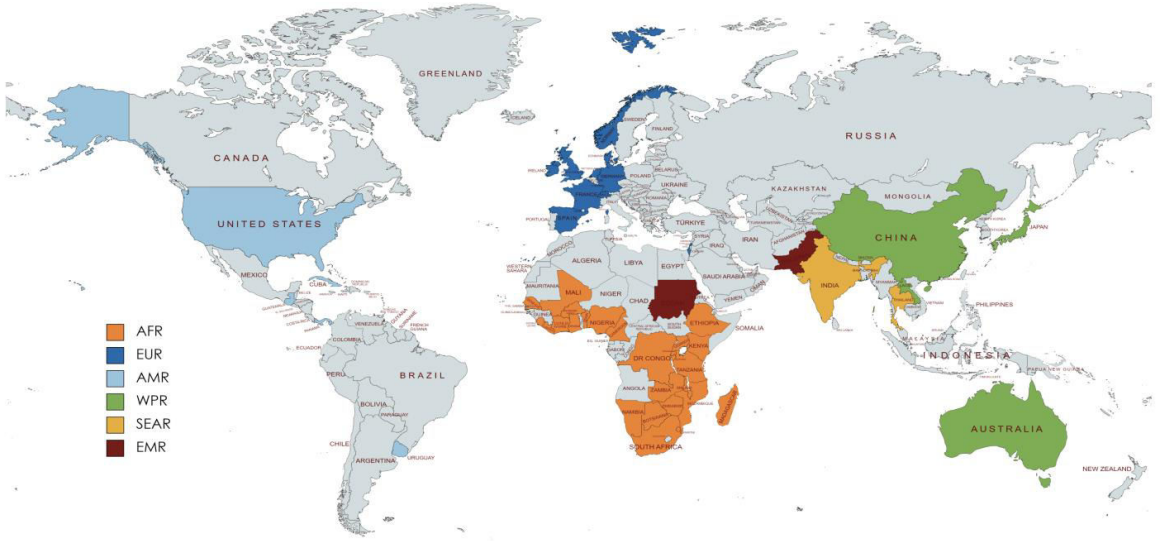




VCWG – 18th annual meeting 2023 – Accra Ghana

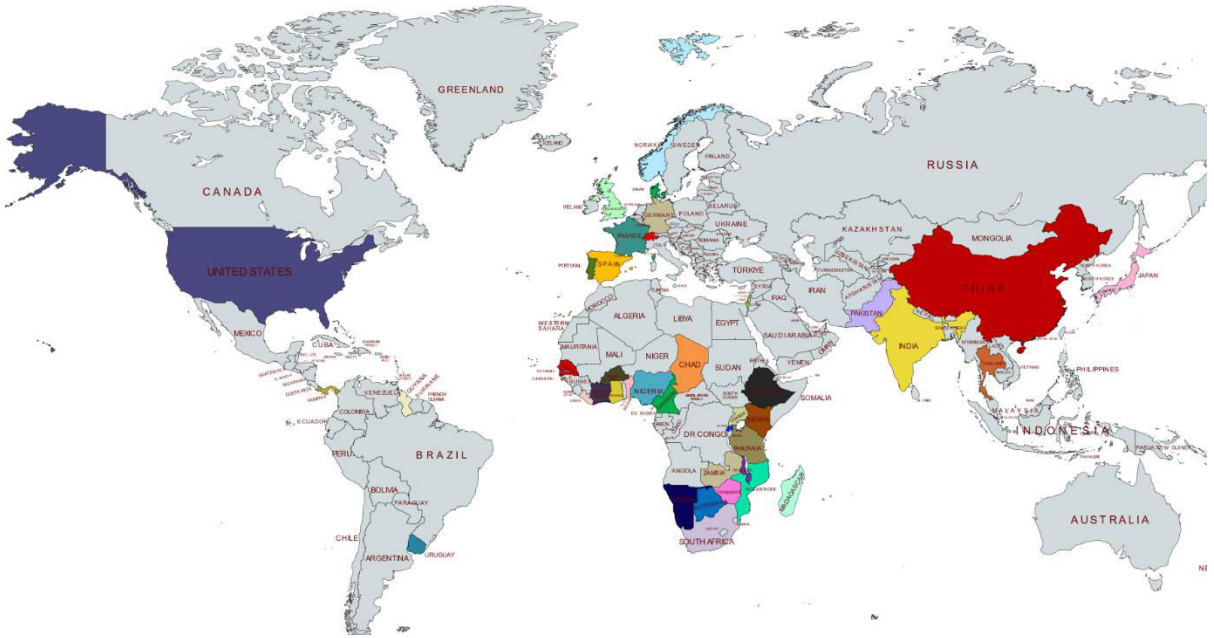
VCWG 18th annual meeting, Feb 2023:
~339 participants from 49 countries
(34 malaria-affected countries)

THIS YEAR, the RBM VCWG-18 meeting was held **in Accra, Ghana, for the first time in an African country**, and had **339 attendees**. Participants came from **49 different countries**, representing six WHO regions (African AFR, Americas ARM, Eastern Mediterranean EMR, European EUR, South-East Asian SEAR and Western Pacific WPR Regions) (see F*igures 1a & 1b*).



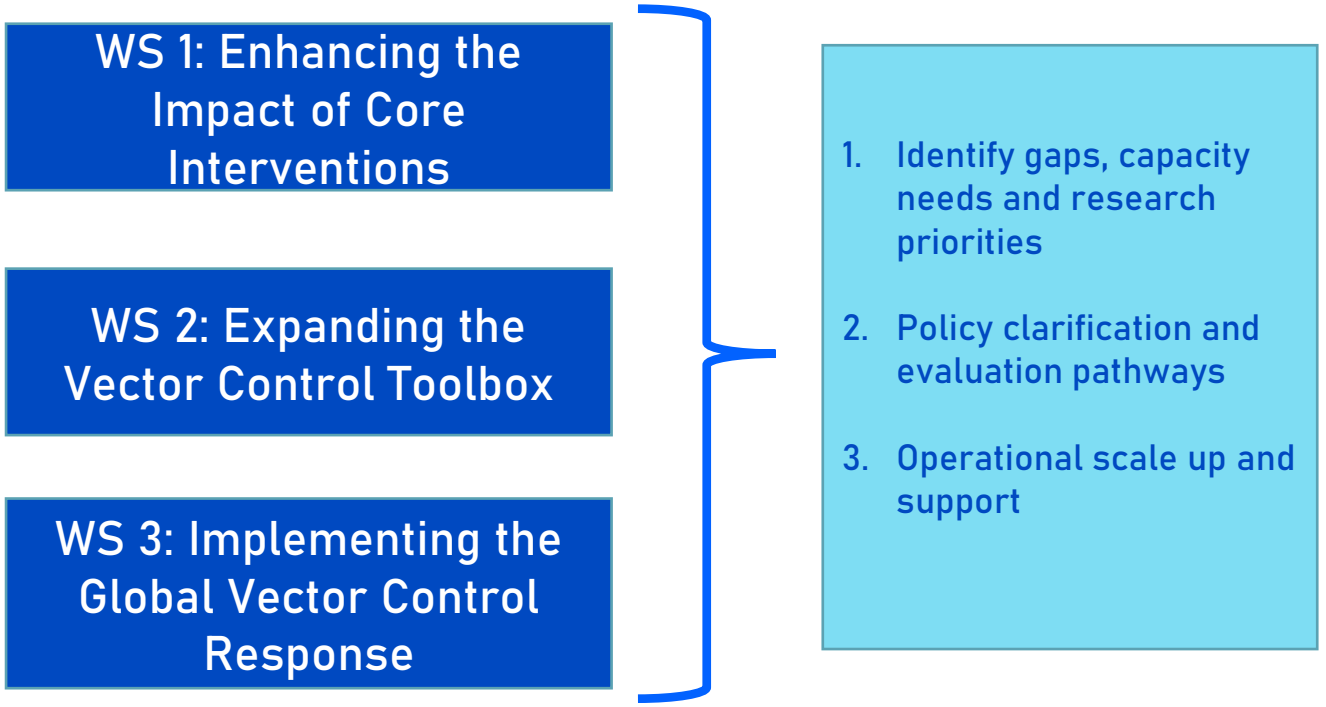
- Meeting presentations and photos are available on the RBM website

VCWG – 19th annual meeting 2024 in Kigali



VCWG 19th annual virtual meeting registrants as of 11 April:
221 participants from 43 countries
(30 malaria-affected countries)

VCWG is organized around 3 workstreams; each with three themes of output.
Task Teams focus on topics under each of these themes in each WS



Detailed workplans have been developed for each workstream

Workstream 1: Enhancing the Impact of core interventions (ITNs and IRS)

Co-leads:
- Allan Were, MSH; awere@msh.org
- Mary Kante, Eauclaire consulting; mkante@eauclaireconsulting.co

Task Team 1	Task Team 2	Task Team 3	Task Team 4
• Using data to inform optimal selection of core interventions. • Leads: D. Levi Hinneh and Chrispin Williams, NMCP Liberia; Sarah Burnett, USAID; Ketty Ndhlovu, NMEP Zambia	• Addressing biological threats; new insecticides for vector control (for IRS and ITNs) • Leads: Christen Fornadel, IVCC; Mulamuli Mpofu, Chemonics International	• Private sector involvement for sustainable vector control • Leads: Samuel Asiedu, AGAMal Ghana; Jessica Rockwood, International Public Health Advisors; Andrew Saibu, IVCC, Ghana	• Addressing non-biological threats: ITN quality, access and use, durability/replacement • Leads: El Hadji Amadou Niang, UCAD Senegal; Lucia Fernandez, CHAI

Workstream 2: Expanding the vector control toolbox

Co-leads:
- Derric Nimmo, IVCC: derric.nimmo@ivcc.com
- Eric Ochomo, KEMRI: eochomo@kemri.go.ke

Task Team 1	Task Team 2	Task Team 3
• Larval Source Management	• Innovations in vector control and vector surveillance	• Anthropology and human centered design (interface between vector control and human behavior)
• Lead: Elijah Juma, PAMCA	• Lead: Tullu Bukhari, ICIPE Kenya; Yang Hu, CHAI	• Lead: Fatou Jaiteh, ITG, The Gambia

Workstream 3: Implementing the Global Vector Control Response

Co-leads:
- Chadwick Sikaala, Elimination 8, csikaala@sadce8.org
- Anne Wilson, LSTM, Anne.Wilson@lstmed.ac.uk

Task Team 1	Task Team 2	Task Team 3	Task Team 4
• Integrated Vector Management • Leads: Jo Lines, LSHTM; Charles Mbogo, KEMRI Kenya	• Capacity and collaboration • Lead: Givemore Munhenga, NICD South Africa	• *Anopheles stephensi* response • Leads: Melissa Yoshimizu, USAID; Sarah Zohdy, CDC; Susanta Ghosh, Mangalore University India	• Vector Control in Humanitarian Emergencies • Leads: Joe Lewinski ; Julius Kasozi, UNHCR Uganda

KEY ACHIEVEMENTS IN 2023

1. Developed supportive guidance documents:

- Global Vector Control Response to invasive *Anopheles stephensi*: Consensus Statement
- Vector Control Epidemiological Impact Evaluation Staff and Technical Assistance Request Guidance
- Promoting vector control in humanitarian emergencies

2. Created a new Task Team on Vector Control in Humanitarian emergencies

3. Participated in a workshop to update the RBM strategy – Geneva in October 2023

4. RBM 29th Board meeting – Dubai – December 2023

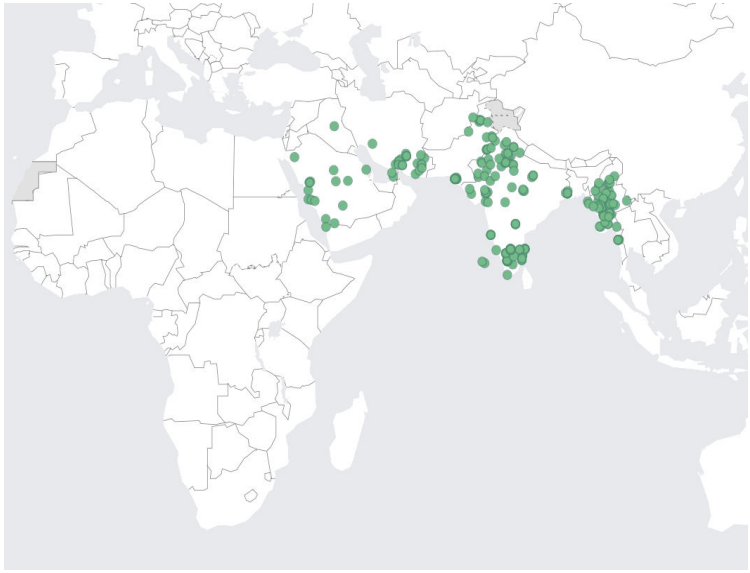
1. Galvanising efforts towards addressing the invasion of *Anopheles stephensi* in Africa.

An stephensi invading the African continent

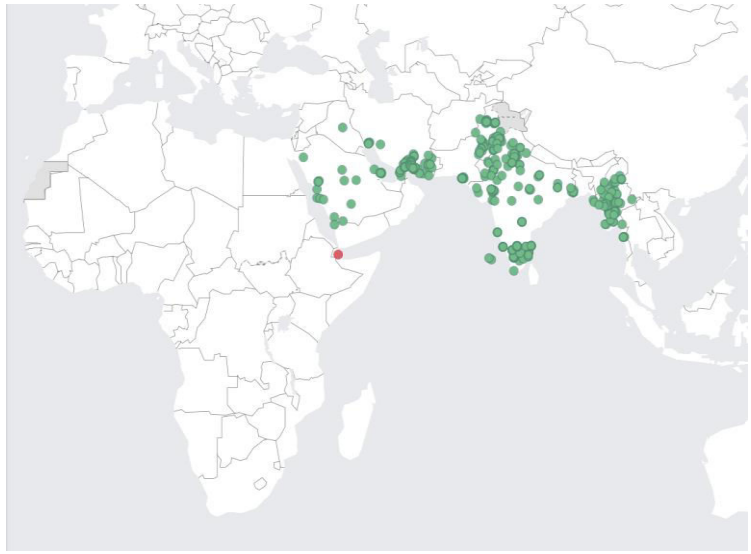
Invasive
Native
Not found

Data source: Malaria Threats Map
Map Production: Global Malaria Programme
World Health Organization

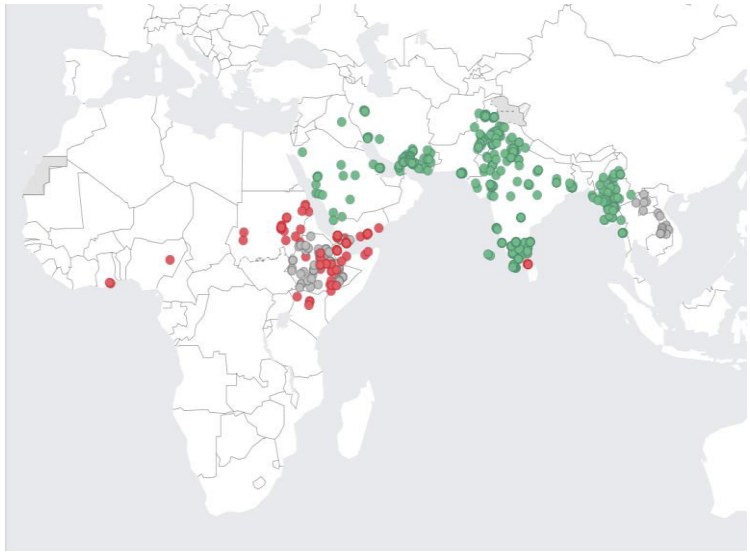
World Health Organization



before 2012



2012



2023

- Djibouti (2012), Ethiopia (2016), Sudan (2016), Somalia (2019), Nigeria (2020), Kenya (2022), Eritrea (2023), Ghana (2023)

- Vector breeds in artificial man-made breeding sites – like Aedes and Culex
- Increased urban malaria burden in the African continent as it spreads.
- Vector will be difficult to target with standard malaria vector control interventions.
- Vector can maintain high malaria transmission rates in dry seasons
- Dry season malaria outbreak in Ethiopia (Fitsum et al 2023)

Joint VCWG/MSWG consensus statement: Global Vector Control Response to invasive *Anopheles stephensi*

RBM Partnership To End Malaria | Vector Control Working Group

RBM Partnership To End Malaria | Multi-sectoral Action Working Group

Global Vector Control Response to invasive *Anopheles stephensi*: Consensus Statement

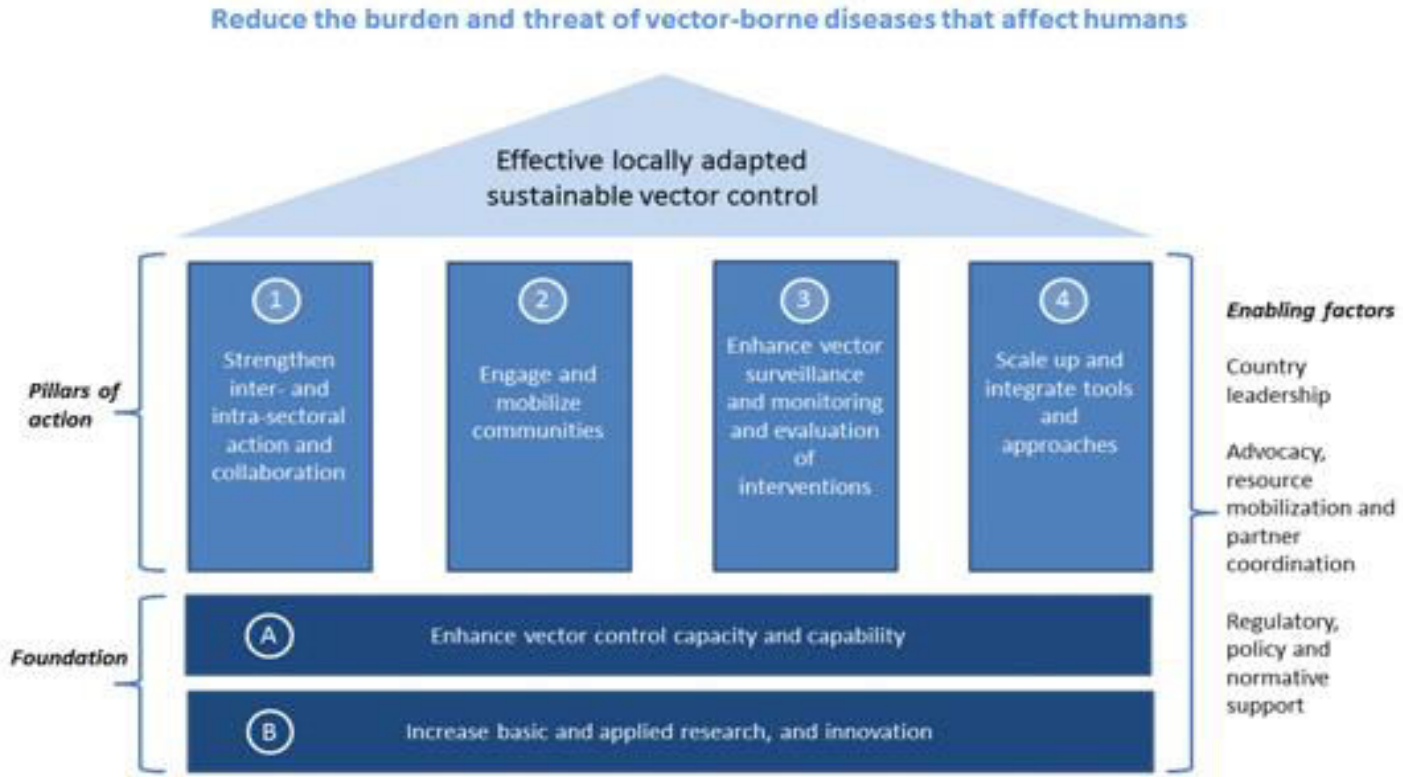
Background

The RBM Partnership to End Malaria (RBM) Vector Control Working Group (VCWG) and Multi-Sectoral Working Group (MSWG) aim to raise awareness and catalyze action amongst its partners to prevent the spread and impact of the invasion of *Anopheles stephensi*. The work of these RBM Working Groups is designed to support the World Health Organization (WHO) in its role to coordinate an effective response to prevent further spread of the vector and reduce potential impact where it now exists. In the last decade, the urban malaria vector *An. stephensi* has invaded Africa and Sri Lanka and seems to be spreading, given new reports of its detection. The area already invaded by *An. stephensi* has not been clearly delineated to date, as surveillance efforts targeted at this vector are only starting to be scaled up. *Anopheles stephensi*-mediated malaria transmission in urban and peri-urban areas may undermine significant progress made against malaria in the past two decades. Various initiatives are being coordinated by WHO, UN-Habitat and others to better understand the extent and origin of the *An. stephensi* invasion and explore optimal approaches for surveillance and control. For example, a regional initiative against *An. stephensi* in Africa was launched by WHO in September 2022 with the aims of i) increasing collaboration, ii) strengthening surveillance, iii) improving information exchange, iv) developing guidance, and v) prioritizing research. The WHO also coordinated development of the Global Framework for the Response to Malaria in Urban Areas that emphasizes the role of city leaders, health programmes and urban planners in responding to urban malaria, including the threat posed by *An. stephensi* [1].

The RBM VCWG and MSWG seek to complement the work of WHO, UN-Habitat and others by facilitating the exchange of knowledge and best practices to address this invasive species to build a common understanding and identify gaps in our collective response. The RBM Working Groups are uniquely positioned to support this objective via their diverse membership, including malaria control programmes, representatives of other ministries, the private sector, implementing partners, and research and academic organisations. Following the initial WHO Vector Alert[2], the RBM VCWG convened online meetings to build a common understanding and identify where there may be gaps in a collective response [3]It is recognised that a response to *An. stephensi* is not a stand-alone initiative and must be developed and implemented within Africa's broader public health and vector control context. There are unique aspects to this challenge that require new approaches, including enhanced surveillance, deployment of additional vector control approaches to what are currently deployed for typical Africa malaria vectors, and consideration of the roles of different partners and funding sources. Each RBM partner can make an important contribution towards the response against invasive *An. stephensi* drawing on principles of the WHO Global Vector Control Response 2017-2030 (GVCR) [4].

First detected in Djibouti in 2012 and Sri Lanka in 2017, *An. stephensi* has been detected in Ethiopia, Kenya, Nigeria, Puntland, Somalia, Sudan and Yemen (updated detections can be found on the WHO Malaria Threat App [5]). The epidemiological impact has not been defined but, based on experiences from the native range of the vector and from some sites in Africa, could be significant. Malaria in Djibouti was nearing elimination before *An. stephensi* was detected in 2012. By 2018 there were more than 100,000 suspected malaria cases

1



- Calls on RBM partners and others to support the fight against *An. stephensi*
- Aims to support work of WHO, UN-Habitat and others by facilitating sharing of knowledge and best practices
- Also working with research partners to identify key research gaps

2. Development a guide for NMPs to inform requests for staff and/or Technical Assistance for evaluations of the impact of vector control interventions on malaria burden or transmission as part of Global Fund application in collaboration with SMERG

Vector Control Epidemiological Impact Evaluation Staff and Technical Assistance Request Guidance

Introduction

- This is meant to be a guide for national malaria programs to inform requests for staff and/or technical assistance for evaluations of the impact of vector control interventions on malaria burden or transmission as part of Global Fund applications. The description of the positions/roles in the table below can be used to develop terms of references.
- This brief guide provides an overview of two common types of evaluations—using existing routine data sources and conducting cross-sectional or cohort studies. It also provides a description of the staff/technical assistance roles and the expected level of effort for these roles. Routine data sources have the advantage of allowing impact evaluations to be conducted at a lower cost, at a more granular level, and with greater breadth across the country than through cross-sectional and cohort studies. Evaluations using routine data sources are typically used to inform national and sub-national vector control decisions. Cross-sectional and cohort studies are roughly 10 times the cost of evaluations conducted using routine data sources, including increased LOE and staff level, but provide higher quality data that accurately capture trends in community-based malaria prevalence or incidence with more precision. Cross-sectional and cohort studies are generally conducted to produce generalizable results to inform both national and global decision-making.
- National malaria programs may want to prioritize vector control impact evaluations when new interventions, or new combinations of interventions are being introduced, when interventions are withdrawn, or when the program is actively considering a change in vector control strategy or policy and would like data to inform specific decisions. For example, in Burkina Faso, Rwanda, Mozambique, and Nigeria national malaria programs engaged the New Nets Project to conduct evaluations of new types of ITNs through a cross-sectional evaluation. In Cote d'Ivoire, the NMCP engaged PMI VectorLink to conduct an evaluation assessing the impact of IRS over the first two years of implementation using routine data sources. In Sierra Leone, the NMCP engaged PMI VectorLink to conduct an evaluation assessing the impact of co-deploying IRS and PBO ITNs compared to PBO ITNs alone using routine data sources.

- **Description of Positions, Roles and required experiences**

3. Vector Control in humanitarian emergencies

- Created a new Task Team for VCHE
- Co-hosted 2 events in Washington DC and Accra together with the UN Foundation on ‘Protecting Displaced Populations from Vector Borne Diseases’.
- Released a statement on VCHE on World Mosquito Day to raise awareness

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World Mosquito Day and Humanitarian Emergencies

Sunday August 20 is “World Mosquito Day” commemorating the day, August 20, 1897, the British medical officer in India, Ronald Ross found the malaria parasite in the “dapple-winged” mosquito. Ross marked the scientific breakthrough by penning:

O million-murdering Death; I know this little thing; A myriad men will save.

This “little thing” Ross discovered changed the world, breaking from the past “bad air” theories of malaria transmission and initiating the new science of “malariology” that has saved many millions over the decades. Now in 2023, the staggering increases in population displacement and humanitarian emergencies demand further change toward more focused efforts, policy flexibility and funding for these most vulnerable populations.

Strategy success and stagnation

The global struggle against malaria has seen successes and stalemates this past century. The “Malaria Eradication Era” of the late 1950’s and early ‘60s, implementing the new technologies of Indoor Residual Spraying (IRS) with DDT and large-scale access to inexpensive and safe chloroquine showed tremendous gains and saved millions of lives across much of the world, with the exception of most of Africa. Gains stagnated, and in several countries reversed, due to insecticide and drug resistance, financial constraints and what some saw as the overreliance on narrow, universally applied control tools, the “eradication of malariologists” and lack of adaptation and problem solving.

The second wave of global efforts in the late ‘90s came with the new tools of insecticide treated nets (ITN), improved diagnostics and drug strategies and the revolution of information communication technologies. Over the past five years progress has again slowed, due in part to the challenges of insecticide and drug resistance; and possibly, overreliance on a single universal control tool – this time ITNs rather than DDT. As the number of people protected by IRS fell from 153 million in 2010 to 80 million in 2021, the focus turned to ITNs, with almost 3 billion distributed over the past two decades. But we are again at an impasse. From 2015 to 2021 global deaths increased 41% from 438,000 to 619,000.

The Resistant Mosquito: Staying Ahead of the Game in the Fight against Malaria

- Discover how we combat malaria resistance
- MOOC addresses insecticide challenges in mosquito vectors of disease.

- Starting the free course (for six weeks with one to two hours of weekly study) from May 13th.
- A simple registration

- Many thanks to all contributors from RBM VCWG, University of Basel, the Swiss TPH, and many other organisations and institutions

Join our Massive Open Online Course

University of Basel

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