

Meeting report of the joint meeting between Vector Control & Multi-Sectoral Working Groups: The role of multisectoral approaches to vector control

**Co-chairs: Corine Ngufor & El Hadji Amadou Niang (VCWG) &
Graham Alabaster & Peter Mbabazi (MSWG)
Radisson Blu, Kigali, Rwanda
Wednesday 17 April 2024**

Update from RBM VCWG (Corine Ngufor, El Hadji Amadou Niang)

Objectives of the VCWG:

1. Aligning Partners: Ensure all RBM partners follow best practices to maintain universal coverage with effective vector control interventions.
2. Supporting Implementation: Facilitate the application of WHO-generated vector control guidance to help achieve specific malaria elimination targets.

Membership and Participation:

- Participants: Includes national programmes, product manufacturers, academia, implementers, policymakers, multi-laterals, and civil society organisations (CSOs).
- Annual Meetings:
 - 18th meeting (Feb 2023) in Accra, Ghana: ~339 participants from 49 countries.
 - 19th meeting (April 2024) in Kigali: 221 registrants from 43 countries as of April 2024.

Work streams and Themes:

Three Work Streams, each focusing on different themes and tasks:

1. Enhancing the Impact of Core Interventions: Improving the effectiveness of insecticide-treated nets (ITNs) and indoor residual spraying (IRS).
2. Expanding the Vector Control Toolbox: Innovating new tools and strategies for vector control.
3. Implementing the Global Vector Control Response: Ensuring comprehensive and effective global responses to vector control challenges.

Key Achievements in 2023

1. Guidance Documents: Developed documents including the Global Vector Control Response to invasive *Anopheles stephensi* and guidance for evaluating vector control interventions.
2. New Task Teams: Established teams focusing on vector control in humanitarian emergencies.
3. Workshops and Meetings: Participated in workshops to update the RBM strategy and held board meetings to discuss progress and future steps.

Challenges and Focus Areas

- *Anopheles stephensi* Invasion: Highlighted the spread of this vector in Africa and the associated increase in urban malaria. Calls for collaborative efforts to combat its spread.
- Vector Control in Humanitarian Emergencies: New initiatives to protect displaced populations from vector-borne diseases, with events and statements to raise awareness.

Update from RBM MSWG (Graham Alabaster, Peter Mbabazi)

The MSWG Updates presentation from April 17, 2024, provided an overview of the group's recent activities, achievements, challenges, and future plans within the RBM Partnership to End Malaria. The session was Co-chaired by Graham Alabaster (UN-Habitat) and Peter Mbabazi (Ministry of Health Uganda), and coordinated by Konstantina Boutsika (Swiss TPH).

In 2023, the MSWG made progress with the Malaria Multisectoral Action Framework, emphasizing the importance of actions outside the health sector. The framework and the joint WHO/UN-Habitat Urban Malaria Framework gained traction. The MSWG participated in regional meetings in Nairobi, Harare, Dakar, and Brazzaville, and hosted the 5th RBM MSWG Annual Meeting in Accra, Ghana. This meeting included panels with city mayors and the private sector, focusing on the Healthy Cities Healthy People Initiative and Pathfinder projects. The joint session with the VCWG was successful.

Challenges included securing funding for the Healthy Cities Healthy People and Pathfinder initiatives, recruiting more multisectoral partners into the MSWG, and integrating multisectoral engagement as a global fund priority.

For 2024, the MSWG plans to develop performance indicators for multisectoral engagement through consultations with members, ensuring NMCPs include these objectives in their strategic plans. The CRSPC will recruit consultants to support countries in multisectoral engagement, trained by the MSWG. The group will engage with The Lancet Commission on *Aedes*-borne diseases and include multisectoral engagement progress reporting in annual SRN meetings. Interim feedback sessions to discuss the results of annual MSWG meetings will continue.

The presentation highlighted opportunities from The Yaoundé Ministerial Declaration, which emphasizes local leadership and enhanced coordination mechanisms for malaria control at subnational levels. This strategy involves various sectors and stakeholders to ensure a unified response to malaria, focusing on strong leadership in multisectoral action to provide appropriate tools to at-risk populations, including those in hard-to-reach and conflict areas.

The Lancet Commission on *Aedes*-borne diseases identified major cities at risk from *Aedes*-transmitted diseases. Preventative measures such as environmental modifications, proactive vector control, wide-scale vaccination, and disease and mosquito surveillance are necessary. Collaboration with rapidly growing impoverished communities is essential for developing innovative solutions.

In conclusion, the MSWG continues to focus on multisectoral approaches to malaria control, addressing challenges and leveraging opportunities to enhance coordination and engagement across sectors. The group aims to integrate these strategies into future urban planning and disease control efforts.

Building a broader approach to mosquito management across the built environment (Seth Irish, WHO GMP)

The presentation by Seth Irish, a technical officer at the GMP WHO, focuses on expanding mosquito management in urban settings, highlighting the need for a broader approach.

Seth explains that urban areas, with their complex environments, are crucial for intervention compared to rural settings. Urban areas include diverse housing and water systems, and larval sites that support mosquito vectors like *Aedes aegypti*, *Aedes albopictus*, and *Anopheles stephensi*. Cities have better capacities to manage these diseases.

The presentation reviews suitable interventions for urban settings. While IRS and ITNs are used, the additional use of house screening and LSM is emphasised. Space spraying is not recommended due to insufficient evidence of its impact on malaria control.

WHO guidance stresses an integrated response to vector-borne diseases, considering others besides malaria, such as those borne by *Aedes* mosquitoes. Effective management requires community engagement, urban-specific surveillance, and enhanced cross-sector capacity. Collaboration beyond the health sector, involving urban planning, environmental management, and civil engineering, is crucial.

The need for broader mosquito management is discussed. Many factors contributing to malaria transmission are managed by city governments or private companies, such as sanitation, road construction, drainage, and water supply. Solely focusing on the health sector leads to a limited response. Greater engagement with urban planning, housing construction, and environmental management professionals is needed for effective changes.

In conclusion, it is stressed that urban settings need special attention due to their complexity and management capacity. Expanding malaria prevention beyond the health sector and integrating efforts from various fields is essential for comprehensive mosquito management. This strategy leverages existing guidelines and encourages innovative, collaborative solutions to address malaria transmission in urban settings. Intersectoral communication and cooperation are key to managing all aspects of the built environment contributing to mosquito proliferation.

Building a broader approach to mosquito management across the built environment (Michael Macdonald, consultant)

The presentation by Michael Macdonald focuses on expanding mosquito management strategies within urban environments. It emphasises the integration of healthy city initiatives, global frameworks for urban malaria control, and vector management responses, with a strategic partnership with private pest management associations. Key tactical opportunities identified include improved targeting and delivery of LSM, leveraging urban agriculture, utilising space sprays, microcredit for housing improvements, and enhancing surveillance and citizen science initiatives. The presentation advocates for establishing institutional training networks and devolved vector control services supported by intersectoral collaboration.

Technological advancements highlighted include the use of unmanned aerial systems for remote sensing and larvicide delivery, and wide area larviciding, supported by citizen science and information management tools like ZZAPP. The importance of urban agriculture, especially in cities like Accra, is highlighted, linking microfinance and payments to incremental housing improvements.

A significant part of the strategy involves modifying unimproved housing to provide equitable mosquito protection, which can be achieved cost-effectively by closing gaps with treated netting. This method has shown high efficacy against multiple mosquito species and high user acceptance, with the potential to provide protection at a cost comparable to ITNs. The presentation concludes that house screening is a flexible, less disruptive, and a longer-lasting alternative to IRS, with broad acceptance among residents and substantial protective benefits against VBDs.

Locally focused approaches to financing: Uganda's experience regarding IRS Financing (Robert Mugerwa, Uganda NMCD)

Uganda's approach to financing IRS as part of its National Malaria Strategic Plan 2021-2025. The plan targets high-burden districts, with DFID and PMI currently funding sixteen districts, though DFID exited 6 districts in 2022, and GF supports 14 more.

The business case for IRS includes a defined target market, a clear needs assessment, and an IRS marketing strategy. The need for modelling the impact of IRS in target areas is emphasised. Malaria Free Uganda (MFU) leads various resourcing efforts, including in-kind and financial contributions from companies, with a total of \$505,000 raised in 2023. Corporate Social Responsibility (CSR) initiatives are highlighted for their community impact and employee morale benefits. Foundations like MFU engage in advocacy activities, including engagements with parliament, private sector advocacy, presidential recognition, cultural and religious engagements, and sports events for resource mobilization.

Copayment mechanism for malaria commodities, particularly QAACTs, aims to increase access, especially in rural areas, by assessing supply chain networks, pricing, and availability. The mechanism involves various markups and subsidies, detailed in the presentation.

Free market principles and pooled procurement are discussed, with pooled procurement noted for quality control, reduced prices, and faster processes, though it may sideline local industries and reduce national control.

Out-of-pocket expenditures and domestic resource mobilization efforts are noted, with policies drafted for workplace malaria strategies in companies. Mechanisms to engage the private sector include private spray associations, schools, hospitals, hotels, military barracks, and manufacturing companies.

Potential private sector purchasers for financing IRS include private companies, mission hospitals, NGOs, Rotary clubs, private philanthropists, and pest control companies, with specific mention of Pilgrim Africa's sprayer model. The presentation concludes with notes on hiring spray teams and regulatory oversight for pest control industries.

New Routes to Market (David McGuire IVCC)

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Malaria Control Program, Benso Oil Palm Plantation (BOPP), PLC (Samuel Asare-Bediako Benso Oil Palm Plantation, Ghana)

The MCP at Benso Oil Palm Plantation (BOPP) PLC, Ghana was initiated to tackle the high incidence of malaria among its workforce and their dependents. Established in 1976 as a joint venture between the Ghanaian Government and Unilever, BOPP is now managed by Wilmar, covering a 6799-hectare concession with a significant population residing on the estate.

Malaria accounts for 30-45% of outpatient cases at BOPP, leading to significant lost workdays. In response, the company launched its Malaria Control Programme in 2017, aiming to reduce malaria by 50% within five years. Measures include sanitation improvements, distribution of insecticide-treated nets, early testing, treatment, and follow-up.

In 2021, Indoor Residual Spraying (IRS) was introduced, involving training spray operators, orienting beneficiaries, implementing spraying activities, and conducting spray quality and efficacy tests with support from AGAMal Ltd and IVCC. IRS has been consistently carried out from 2021 to 2023.

By 2023, malaria cases on the estate had reduced by 13.2%, with a 20% reduction in cases three years post-IRS compared to the three years prior. This has improved workforce confidence in management's commitment to their health, increased malaria awareness, and provided protection for 3805 people on the estate. Additionally, there has been a notable reduction in domestic insects.

The programme's success highlights the need for a multi-pronged approach to combat malaria. BOPP has also built local capacity for IRS, positioning itself to support other entities interested in similar programmes. The ongoing efforts and collaborations underscore BOPP's commitment to the health and well-being of its workers and their dependents.

Opinion/commentary article (1.5-2 pages) for the broader audience

Two-way dialogue, vision and areas where the two WGs are working together in a complementary way

The attendees are thanked for taking part in the first collaborative meeting between the VCWG and MSWG group. List of outcomes from the joint meeting:

Understanding the changing landscape

- Urbanisation
- Climate
- Conflict
- Increasing inequity

The policy environment

- The SDGs and their localization
- Promoting national policies that lend themselves to local-level implementation

Needed Areas for Action

- Breaking down the silo's
- Promoting multi-sector, multi-disease approach
- Adopting a dual pronged approach
- Full and productive engagement of communities
- Linking demonstration of good practices to guiding longer-term financing