Larval Source Management Work Stream

Co-chairs:
Silas Majambere, Ulrike Fillinger
Aim of the LSM work stream

• to update the evidence base and protocols
• to assess and help develop the local capacity (people and infrastructure)
• to help national programs identify where and how investments in LSM could contribute to malaria control.
Project 1: Draft a consensus statement as RBM VCWG work stream with the aim to change WHO position on LSM

- The “few, fixed and findable” is a barrier to implementation
- Link statement to the Global Vector Control Response
- WHO – new guidelines for vector control are coming based on evaluation of evidence. Statement does still include FFF
- WHO – Need to distinguish between policy change and guidelines for operations
- Group’s consensus on policy change
Project 1:
Draft a consensus statement as RBM VCWG work stream with the aim to change WHO position on LSM

- Huge historical and contemporary evidence that LSM works. Make statement evidence-based
- Advocate for strengths of LSM – resistance management, outdoor biting, reducing population sizes. Also mention limitations of LSM
- Need to involve an economist to improve the statement
Project 2:
Advocating for environmental management including habitat modification and manipulation and **intersectoral collaboration** as priority intervention in LSM

- Reaching out to Public Health Engineers
- Reaching out to the agriculture sector (rice irrigation schemes, plantations, etc.), land authorities, etc.
- African Development Bank (AfDB) planning to invest **$24 billion** in water resource development by 2025;
- “Safeguards for Health Impact Assessments” including Vector Control requirements
Project 3:
Update and expand spreadsheet of WHOPES approved larvicides as source of information; Compile SOPs on: How to test larvicides? & How to test for resistance?

• i2i coordinating work related to getting facilities to GLP certification.
• Developing SOPs describing methods included in WHOPES guidelines for products – mainly LLINS, IRS, larvicide and space sprays.
• Collated existing SOPs for LLINs and IRS
• SOPs for larvicides and space sprays were not up to standard, they are being developed from scratch

Graham Small
Project 4: Review of state of the art technology for LSM (e.g. GIS, satellite imagery, radar, new application equipment, aerial application, drones, mobile apps, etc.)
Project 4: SIS
Spatial Intelligence System for Precision Larviciding

1. Drone imaging of hotspots
2. Precise water body information into iSoper App
3. Targeted larviciding

Chris Thomas
Conclusions

• New technology means we can now map breeding habitats over wide areas at unprecedented spatial and temporal resolutions

• New methods of analysis show promise to identify, locate and prioritize habitat targets in operational time frames for LSM
Effective larviciding for mosquito vector control has been achieved worldwide.

Larviciding is effective in complex habitats including those that are large, cryptic and difficult to access.

Larvicide application methods can be utilized effectively in resource limited settings.
**Project 4:**

**Spraying equipment- conclusions**

- Vector control field workers worldwide have been successfully trained to apply larvicide to complex habitats.

- Advanced larvicide application methods have enabled control of DENV, ZIKV & CHIKV vectors in cryptic habitats across broad geographies, interrupting disease transmission.
Why not?
Project 5: Reviewing operational LSM in vector control programmes – Evidence of impact, training and support needs

LSM in Africa: A lost opportunity to strengthen the evidence base on cost effective malaria control

Desktop review done on: Eritrea, Ghana, Nigeria, South Sudan, Uganda and Zanzibar

Ruth DuPlessis
Project 5: Conclusions

- Additional malaria control tools are required to maintain control and achieve elimination.

- A substantial number of African countries are adopting LSM, however where implementation has taken place, it has tended to be poorly monitored and evaluated.

- Integrated Vector Management is not cross-referenced in World Malaria Reports and is not funded by GF or other large funders.
Project 5: Conclusions

- Environmental management should be given greater prominence as it is sustainable and can be highly effective.

- The lack of international support is out of step with country policy, it represents a missed opportunity for generating additional much needed evidence to support challenging resource allocation decisions in the control of malaria and other vector borne diseases.
Project 6:
Develop guidelines for LSM in emergency situations

- Guidelines will have to be adapted to local situation (emergency situations will differ)
- LSM experts on standby to offer help where needed