

# Updates from the Public Health Entomology TAG



Pan American  
Health  
Organization



World Health  
Organization

REGIONAL OFFICE FOR THE **Americas**

Meeting of the Malaria Technical Advisory Group  
PAHO-HQ Washington DC, Room C  
7 - 8 June 2017

# General principles in vector control in malaria

WHO/CDS/WHOPES/2002.5 Rev.1

1. Measures that reduce **vector longevity**, such as ITNs and IRS, have greater potential impact than measures that reduce only **vector density**, such as environmental management and larviciding.
2. Generally measures that reduce adult densities should only be used as a supplement to ITNs or IRS

*MALARIA VECTOR CONTROL*

DECISION MAKING CRITERIA  
AND PROCEDURES FOR  
JUDICIOUS USE OF INSECTICIDES

By:

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WORLD HEALTH ORGANIZATION  
Communicable Disease  
Control, Prevention and Eradication  
WHO Pesticide Evaluation Scheme (WHOPES)

# General principles in vector control in malaria

- “...The current core malaria vector control interventions are long-lasting insecticidal nets (LLINs) and indoor residual spraying (IRS), with larval source management (LSM) applicable in certain settings where mosquito breeding sites are **few, fixed and findable...**”



## LARVAL SOURCE MANAGEMENT

A supplementary measure  
for malaria vector control

AN OPERATIONAL MANUAL



World Health  
Organization



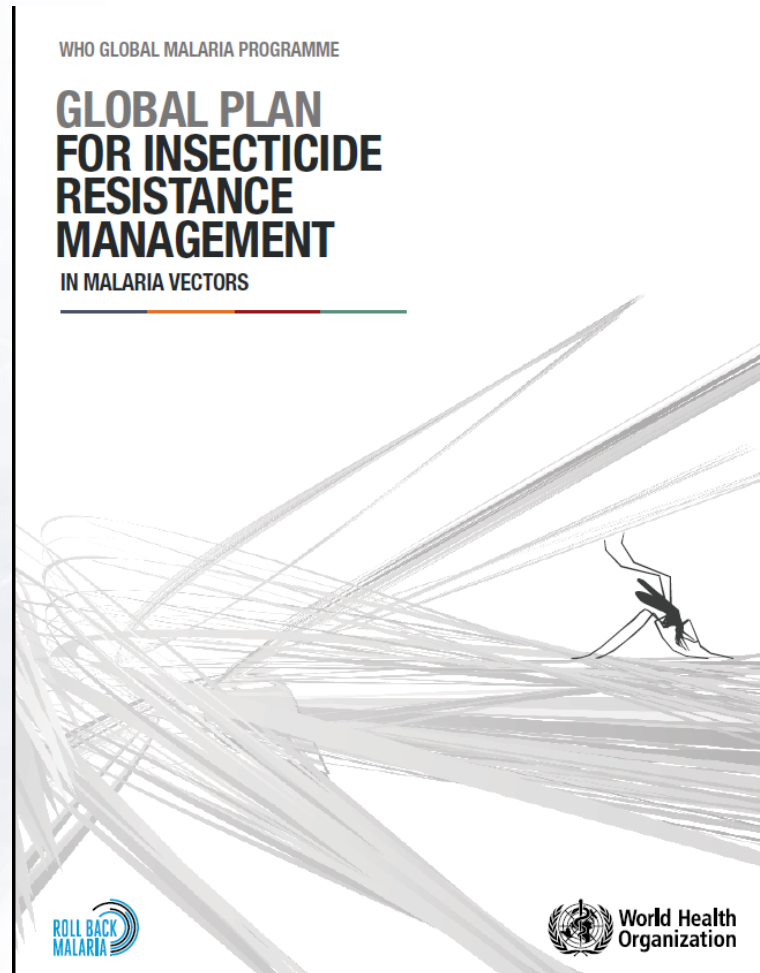
GLOBAL MALARIA  
PROGRAMME

### Interim Position Statement

The role of larviciding for malaria control in sub-Saharan Africa

# General principles in vector control in malaria

- “...IRS and LLINs are the core malaria vector control techniques, because they are not only more effective than other forms of control against mosquitoes that preferentially enter houses for biting and resting, but they also **consist of a uniform set of methods that do not require significant adaptation to local situations...**”
- “...Other methods of malaria vector control have specific roles and are effective only in selected settings and circumstances. Within these settings, such methods require local entomological studies and careful adaptation to suit local conditions. Implementation of such interventions in an inappropriate setting **may lead to wastage of public health resources, and could lead to a risk of malaria control failure...**”
- “... Space sprays, are not currently recommended because of their limited effect in malaria control...”
- GLOBAL PLAN FOR INSECTICIDE RESISTANCE MANAGEMENT IN MALARIA VECTORS. WHO 2012





# Problem exposition

## key vector control issues

**Scenario 1:** where “core malaria interventions” (IRS and LLIN) are not being implemented

**Scenario 2:** where “core malaria interventions” are being implemented under non recommended standards

**Scenario 3:** where interventions to decrease vector density (space spray and larval source management) are being routinely implemented.

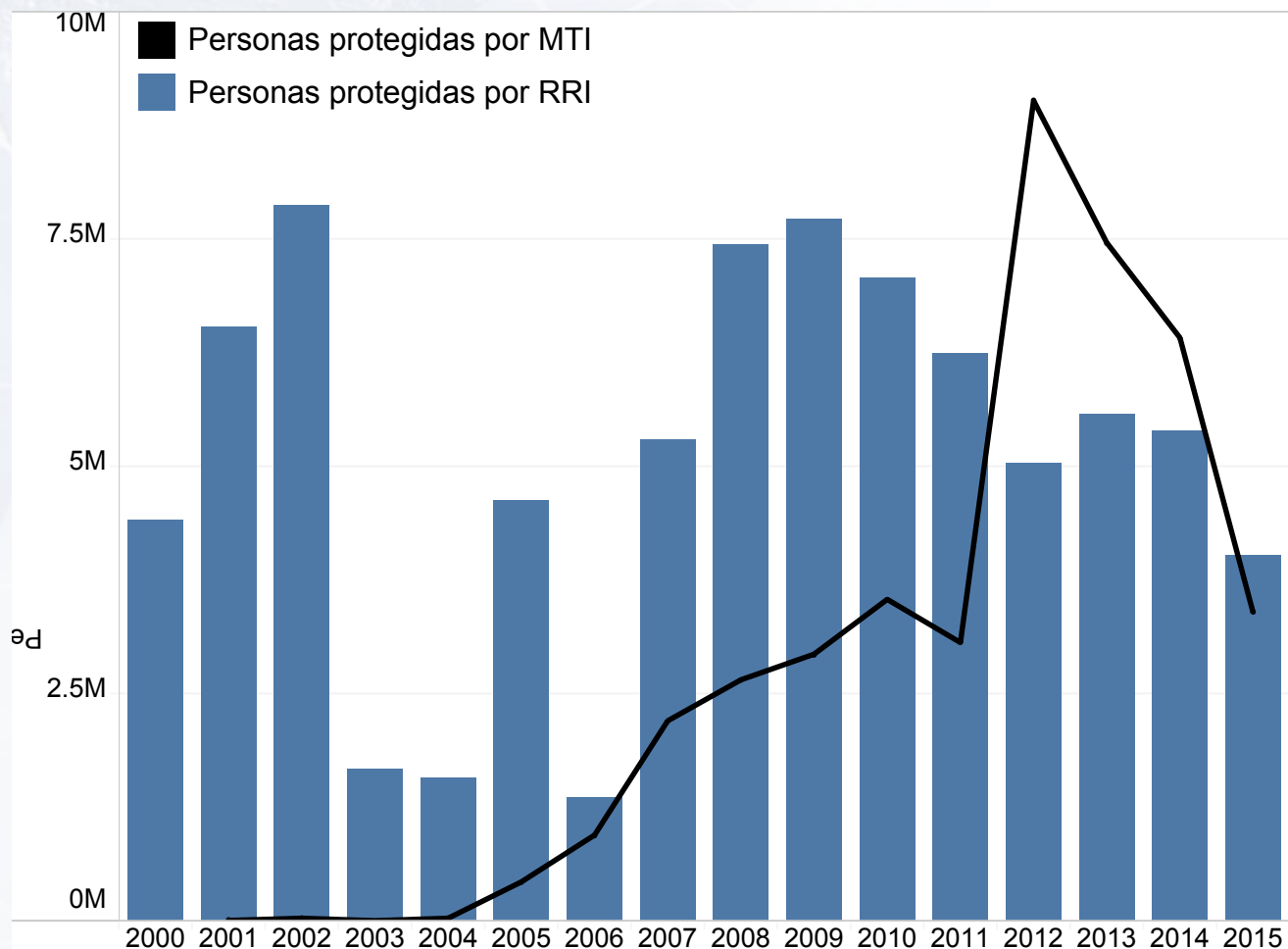
In some settings these interventions predominant over interventions to reduce mortality (IRS and LLIN).

- consuming more budget and operational resources than any other action in malaria? (including diagnosis and treatment)
- distracting cross-sectoral and community efforts and opportunities for advocacy.

## Strategic approach. Regional Malaria Program proposal

PAHO needs to guide countries about the inconvenience of spending resources in not recommended actions and needs to make strong advocacy for focusing the resources and funds on the “core malaria vector control interventions” (LLIN and IRS) and in larva source management only when applicable (where mosquito breeding sites are few, fixed and findable)

## Personas protegidas por Rociado Residual Intradomicilinario (RRI) y Mosquiteros Tratados con Insecticidas (MTI), 2000-2015



Datos no disponibles para Belice (2000 y 2003), Brasil (2003-2004, 2006, 2015), Colombia (2005), Ecuador (2000 y 2014-2015), El Salvador (2000), Guatemala (2000-2001), Guayana Francesa (2004-2006, y 2014-2015), Guyana (2000, y 2002-2003), Haití (2002-2003), Honduras (2000, 2002, y 2005), México (2000, 2003, y 2006), Paraguay (2000), Perú (2000,

## Strategic approach. Regional Malaria Program proposal

1. **Disseminate a position statement** based on key principles and statements that WHO recommends in technical documents (about space spray and larva source management). New WHO document in process (2017).
  
2. Provide specific recommendations to each country based on **review of national official guidelines and additional information**:
  - review current national guidelines and vector control manuals
  - request additional information to countries,
  - provide specific recommendations to each country (official communication)
  
3. **Address specific local situations** along with national malaria programs
  - Identify key scenarios (municipios, foci) where space spray is being used in malaria.
  - Characterize these situations (technical missions): epidemiological situation, costs, human resources doing space spray applications, use of insecticides, operational conditions (equipment, hours, frequencies).
  - Analysis and discussion with malaria programs, national authorities and local teams.
  - Recommendations to national authorities



# Points presented to TAG-PHEVC

1. Recommendations regarding the use of space spray applications of insecticides (Fogging, ULV) in malaria in the Region
2. Provide evidence from the Region regarding the use of space spray applications of insecticides in malaria.
3. Provide additional information and arguments to combat the misuse of vector control interventions in malaria.
4. Recommendations on the approach (strategic path) presented by the Regional Malaria Program to limit the use of space applications and to optimize the current larval control measures.
  - Additional steps ? (behavior studies and evaluations: if exofilic behavior of vectors in America is an argument in favor of space spray an larval control measures)

# SECOND MEETING OF THE TECHNICAL ADVISORY GROUP ON PUBLIC HEALTH ENTOMOLOGY AND VECTOR CONTROL (TAG-PHEVC)

February 1-3, 2017

## Meeting topics included:

- 1) review and update on the current status of vector-borne diseases in the Americas;
- 2) review of progress and achievements to date on implementation of recommendations from the 1<sup>st</sup> TAG-PHEVC meeting (March 2016);
- 3) discussion regarding guidance to countries on use of new technologies for vector control and integrated vector management (IVM);
- 4) discussion regarding PAHO's Regional Public Health Entomology and Vector Control Program's strategic actions to date; and
- 5) review of the technical and operational components of the *Strategic Plan for Public Health Entomology and Vector Control for the Americas*.

## The main recommendations:

- Integrated Vector Management
- Surveillance
- Training in Entomology, Surveillance, Prevention and Control of Vectors
- **Implementation, Monitoring and Evaluation**
- New Tools
- Operational Research
- Social Mobilization and Alliances
- Publications

# Implementation, Monitoring and Evaluation

**Create and field test standardized monitoring and evaluation protocols** with the criteria needed to properly evaluate entomological actions, including IVM, vector control, field operations, work equipment, and operational procedures. Monitoring and evaluation should be conducted to determine the impact of prevention and control actions and their cost-effectiveness, and to the extent possible, impact on disease transmission and incidence.

## Strategic approach. Regional Malaria Program proposal

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**New 2017 WHO review document in process.**
  
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