

# Integrated Vector Management

## WHO Global Strategic Framework

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## Overview

- Evolution in Vector Control since 1983
- The Stockholm Convention 2000 – IVM renaissance
- IVM Global Strategic Framework
- The WHO position paper on IVM

## Insect-borne diseases

Malaria

Lymphatic filariasis

Arboviral infections (dengue, JE, West Nile, Chikungunya, YF)

African trypanosomiasis (sleeping sickness)

American trypanosomiasis (Chagas disease)

Leishmaniases

The common denominator: vector ecology determines the disease distribution



## Key issues

Vector-borne diseases: it takes three to tango

Zoogeography describes the natural distribution of vector species/species complexes

Climate is the major driver

Man-made drivers modulate the distribution and include global climate change, hydrological changes (irrigation, dams), changed land use patterns and urbanization.



## Vector control measures

### Measures to reduce population densities

- Source reduction – different forms of environmental management (engineering, modification, manipulation)
- Predator-prey systems (fish, predator insects, amphibians)
- Microbial toxins
- Chemical larviciding
- Chemical adulticiding (e.g. fogging)

### Measures to reduce vector longevity/vectorial capacity

- Indoor residual spraying

### Personal/community protection

- Insecticide treated nets and materials (short and long lasting)
- Housing improvement
- Zooprophylaxis

### In the pipeline

- Genetically engineered mosquitoes



## IVC back in 1983, and what followed

the utilization of all appropriate technological and management techniques to bring about an effective degree of vector suppression in a cost-effective manner

### Elements

- economics
- vector control technology
- output indicator is vague

WHO 1983



## IVC back in 1983, and what followed

The targeted use of different vector control methods alone or in combination to prevent or reduce human-vector contact cost-effectively, while addressing sustainability issues

### Elements

- economics
- sustainability
- flexibility
- output indicator:  
transmission risk level

WHO 1994



# The Stockholm Convention on POPs (annex B on DDT)

5. With the goal of reducing and ultimately eliminating the use of DDT, the Conference of the Parties shall encourage:
- (a) Each Party using DDT to develop and implement an action plan as part of the implementation plan specified in Article 7.
  - (b) That action plan shall include:
    - (i) Development of regulatory and other mechanisms to ensure that DDT use is restricted to disease vector control;
    - (ii) Implementation of suitable alternative products, methods and strategies, including resistance management strategies to ensure the continuing effectiveness of these alternatives;
    - (iii) Measures to strengthen health care and to reduce the incidence of the disease.



## Post-Stockholm IVM promotion

(GEF supported project in Mexico/Central America)

PDF-B processes in Africa south of the Sahara and the Eastern Mediterranean

New initiatives for GEF supported work on reduction of reliance on DDT in India, SE Asia and the Western Pacific, Central Asia



# Integrated Vector Management

## WHO EMRO Resolution 52/6

WORLD HEALTH  
ORGANIZATION



ORGANISATION MONDIALE  
DE LA SANTE

مَنْظَرُ الصَّحْرَا الْعَالَمِيَّةَا

قرار

RESOLUTION

REGIONAL COMMITTEE FOR THE  
EASTERN MEDITERRANEAN

EM/RC52/R.6  
September 2005

Fifty-second Session

Agenda item 5 (a)

### INTEGRATED VECTOR MANAGEMENT

The Regional Committee,

Having reviewed the technical paper on the importance of vector-borne diseases as a re-emerging public health problem<sup>1</sup>;

Recognizing that a shift to a genuine integrated vector management approach would offer countries opportunities to address the current problems in vector control;

Appreciating the need to develop national integrated vector management strategies and plans;

Convinced of the importance of strengthening of the national and regional capacities in entomology and vector control;

1. **REQUESTS** Member States to:

- 1.1 Establish or strengthen national units for integrated vector management and ensure adequate human and financial resources;
- 1.2 Establish a functional intersectoral mechanism for the collaboration and coordination of all related sectors;
- 1.3 Identify needs, gaps and opportunities for vector control and develop national integrated vector management strategies and plans for all vector-borne diseases;

<sup>1</sup> Document No. EM/RC52/3



Public Health and Environment PHE



### WHO EMRO Resolution 52/6

EM/RC52/3

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2. **REQUESTS** the Regional Director to:
  - 2.1 Take necessary steps to support integrated vector management activities and provide technical support as necessary including national capacity-building;
  - 2.2 Consider the establishment of a regional diploma course in entomology funded by allocations from country regular budget and other resources;
  - 2.3 Update the regional framework on integrated vector management and report regularly to the Regional Committee the progress on the implementation of integrated vector management.



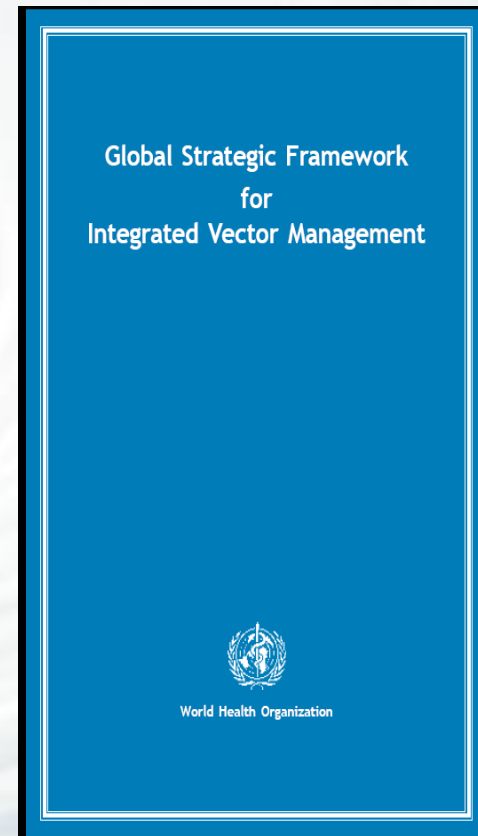
# Global Strategic Framework for IVM

Published in 2004

Based on a WHO Expert Consultation

Responding to demand from Member States, faced with problems of increased vector-borne disease burdens, insecticide resistance and social resistance to spraying, and required to comply with the Stockholm Convention on POPs

Further defining the nature and scope of IVM



## Global Framework: objective

The Global Strategic Framework for integrated vector management has been developed both to address deficiencies in vector control and to improve the efficacy, cost-effectiveness, ecological soundness and sustainability of that control.

More effective disease vector control will make a significant contribution to the attainment of the Millennium Development Goals.



## Global Framework: IVM definition and attributes

Integrated vector management is a process for managing vector populations in such a way as to reduce or interrupt transmission of disease.

Characteristic features of IVM include:

- methods based on knowledge of factors influencing local vector biology, disease transmission and morbidity;
- use of a range of interventions, often in combination and synergistically;
- collaboration within the health sector and with other public and private sectors that impact on vectors;
- engagement with local communities and other stakeholders;
- a public health regulatory and legislative framework.



## Global Framework: IVM definition and attributes (cntnd)

An IVM-based process should be cost-effective, should have indicators for monitoring efficacy with respect to impact on vector populations and disease transmission, and should employ sustainable approaches compatible with local health systems.

It should also allow effective planning and decision-making to take place at the lowest possible administrative levels (subsidiarity).



## Global Framework: Key elements

- Advocacy, social mobilization and legislation
- Collaboration within the health sector and with other sectors
- Integrated approach
- Evidence-based decision-making
- Capacity building



# WHO position statement on integrated vector management



## Introduction

Diseases transmitted by mosquitoes and other insect vectors continue to place a critical burden on the world's poor, particularly in tropical and subtropical areas. Malaria remains the most important vector-borne disease in public health, and the current intensification of malaria-control efforts includes the delivery of a package of vector-control interventions aimed at controlling

## WHO Position Statement on IVM 2008

The new “reductionist” definition of IVM

IVM is a rational decision-making process for the optimal use of resources for vector control

## WHO Position Statement on IVM 2008

### **IVM attributes**

- Cost-effectiveness
- Intersectoral action
- Regulatory and operational measures
- Subsidiarity
- [Evidence-based] decision-making
- Sustainability [and resilience]

*Thank you for your kind attention*

