

# Integrated Vector Management and Capacity building for Vector Control

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**by**

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# Definition of IVM

*A rational decision-making process for the optimal use of resources for vector control*

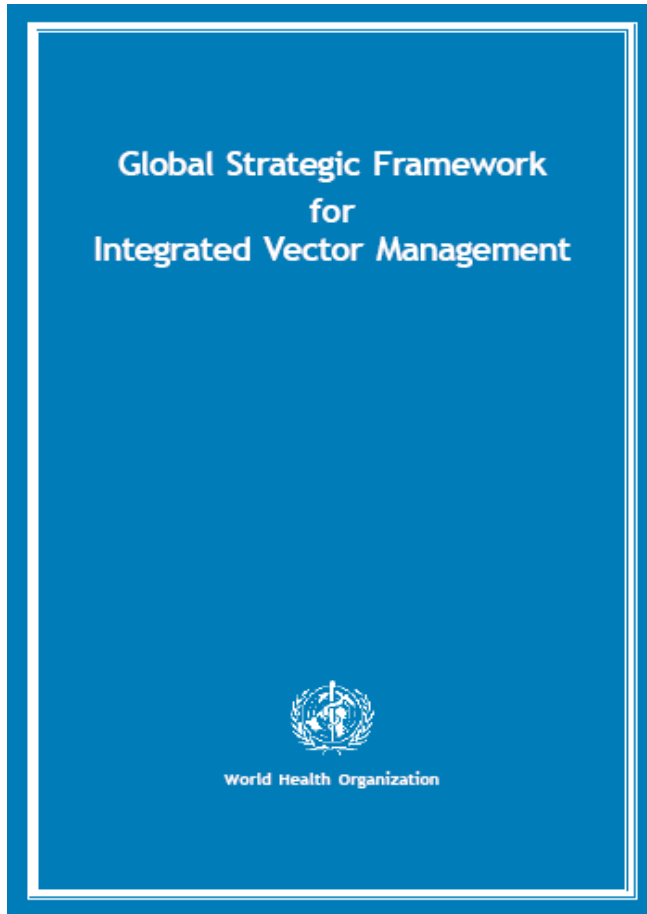


# A Growing Need for Integrated Vector Management

- IVM enables social / *environmental changes* to be addressed effectively in an intersectoral framework
- IVM helps to consolidate and sustain public health achievements from *global malaria initiative*
- IVM principles will contribute to the judicious use of available *insecticides*



# IVM: WHO Global Strategic Framework



## 2004

### Five Key Elements:

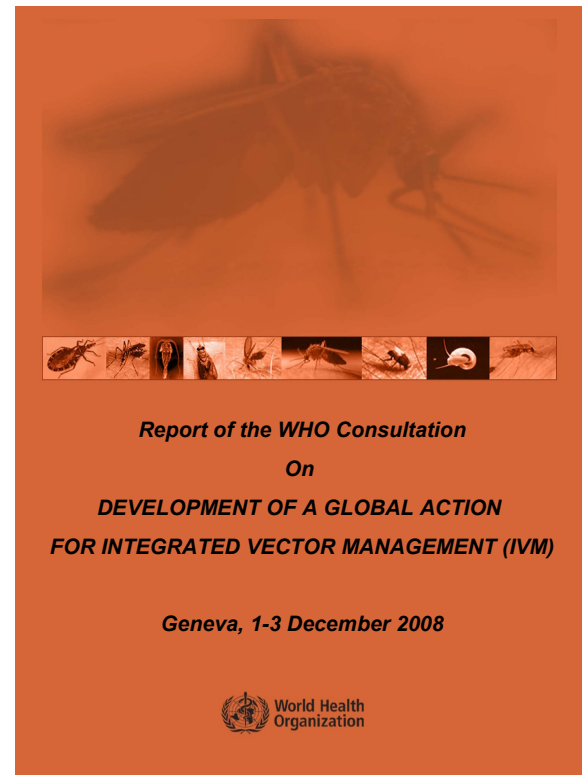
- Advocacy, social mobilization and legislation
- Cross sector collaboration
- Integrated approach
- Evidence-based decision-making
- Capacity-building



# IVM Global Development



May 2007



December 2008

# Regional Resolution

## EMRO: The Eastern Mediterranean 2005

WORLD HEALTH ORGANIZATION  
ORGANISATION MONDIALE DE LA SANTE

قرار  
RESOLUTION

REGIONAL COMMITTEE FOR THE EASTERN MEDITERRANEAN  
EMRC52/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. EMRC52/R.6

## AMRO: The Americas 2008

PAN AMERICAN HEALTH ORGANIZATION  
WORLD HEALTH ORGANIZATION

48th DIRECTING COUNCIL  
6th SESSION OF THE REGIONAL COMMITTEE  
Washington, D.C., USA, 29 September-3 October 2008

Provisional Agenda Item 4.9  
CD48/13 (Eng.)  
6 August 2008  
ORIGINAL: ENGLISH

**INTEGRATED VECTOR MANAGEMENT:  
A COMPREHENSIVE RESPONSE TO VECTOR-BORNE DISEASES**

**Justification**

1. Vector-borne diseases such as malaria, dengue, Chagas, leishmaniasis and filariasis continue to be a major public health problem in the Americas. These diseases disproportionately affect the health of the poor and marginalized populations, cause suffering and further economic hardship and are a serious impediment to development of many countries. For important diseases such as dengue and Chagas, vector control is the only means of protecting populations from infection. However, national capacities to implement vector control programs have been severely weakened. National vector control programs often lack specialists in vector control and as a result, routine entomological activities such as surveillance or monitoring and evaluation of control activities are not conducted.

**Background**

2. The concept of Integrated Vector Management (IVM) is based on the lessons learned from Integrated Pest Management in the agriculture sector and aims to optimize and rationalize the use of resources and tools for vector control. IVM is defined as "A rational decision-making process for the optimal use of resources for vector control."<sup>2</sup> It aims to improve the effectiveness and efficiency of the national vector control programs in order to provide countries with a sustainable, ecologically sound long-term approach to vector management which will reduce dependency on insecticides and protect the population from vector-borne diseases. Implementation of IVM requires institutional

<sup>1</sup> Torres JE, Nishimura M, et al. Exploiting the potential of vector control for disease prevention. Bull. World Health Organization 2005; 83: 942-7.

<sup>2</sup> IVM Definition. WHO position paper on IVM- IVM/INT/08.01, January 2008.



# IVM and the future of vector control

## 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 vectorborne 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 transmission. Several other important vectorborne diseases are neglected tropical diseases, and WHO's Global plan to combat neglected tropical diseases 2008-2015 addresses the challenges of delivering multicomponent packages that include the promotion of integrated vector management (IVM).

Vector control strategies have a proven track record of successfully reducing or interrupting disease transmission when coverage is sufficiently high. Thus, vector control has an important part to play in reducing the burden of vectorborne disease, adding resilience to the public health gains achieved through disease management and giving high priority to prevention.

However, vector control also has proven weaknesses that are contextual in nature and relate especially to technical and managerial deficiencies and obstacles. It is well known that the development of insecticide resistance played a role in the breakdown of the malaria eradication campaign of the 1950s. But today we know how to better monitor and manage vector resistance. Similarly, we have learnt that significant success in the short-term may be a weakness because it can lead to premature diversion of resources. And we know that any particular intervention may not be suitable for every setting; additionally, over-reliance on a single intervention may undermine the flexibility needed by health services to use an adaptive management approach to the control of vectorborne diseases.

April 2008

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



# WHO Position Statement on IVM

## Attributes:

- Cost-effectiveness
- Intersectoral action
- Subsidiarity
- Relevance of local eco-epidemiology
- Sustainability
- Appropriate public health regulatory and legislative framework

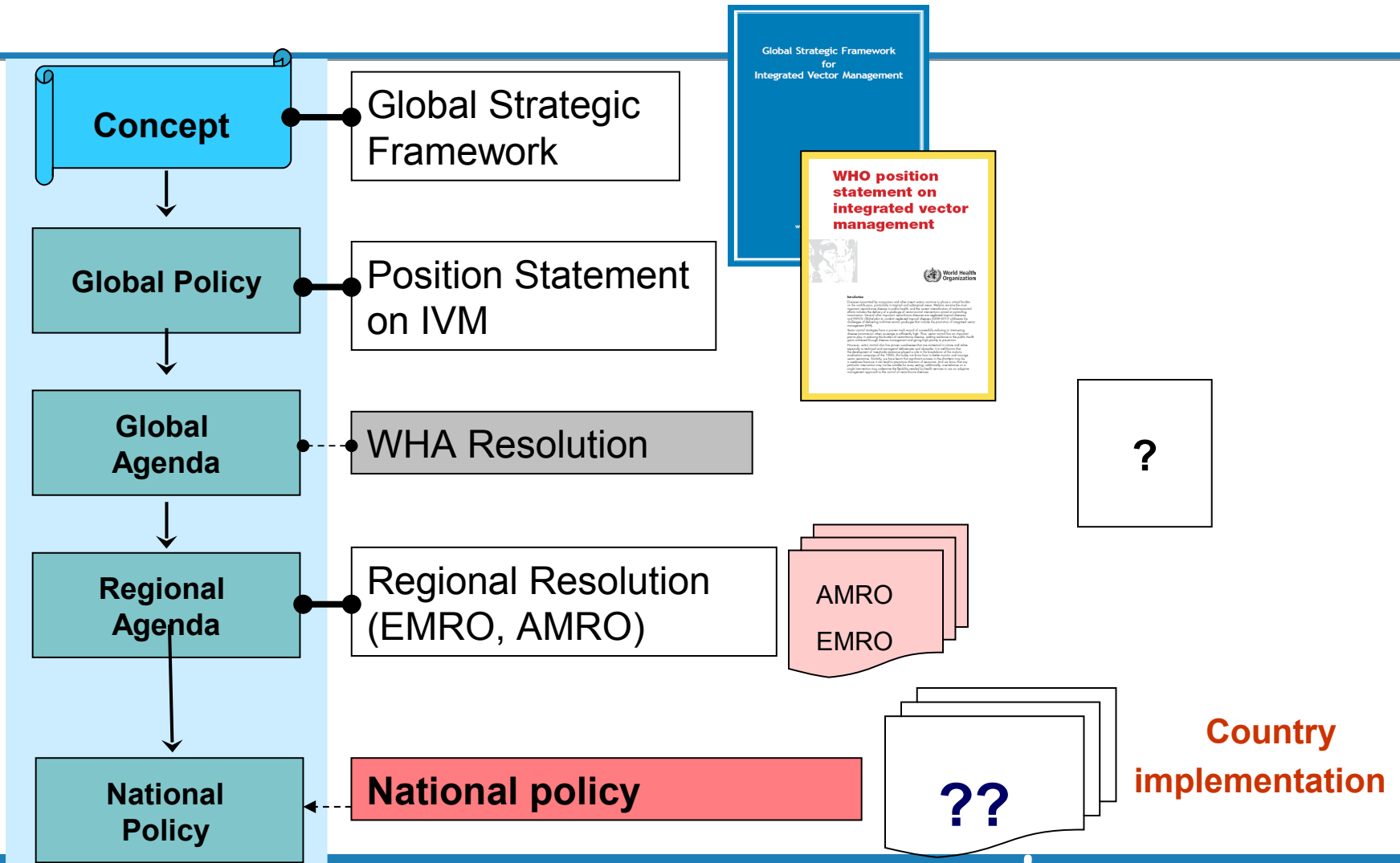




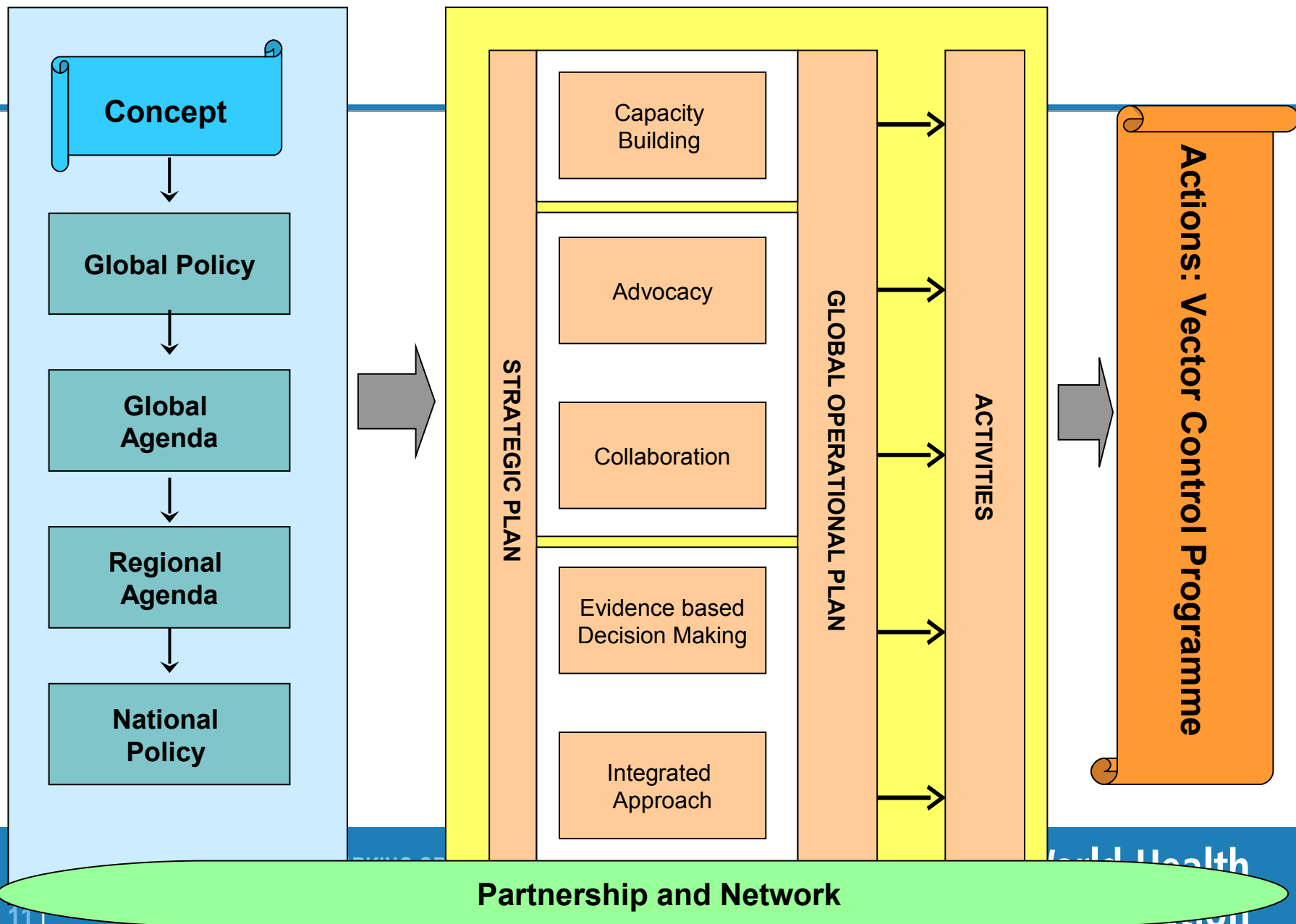
**IVM**

**Policy - Implementation**

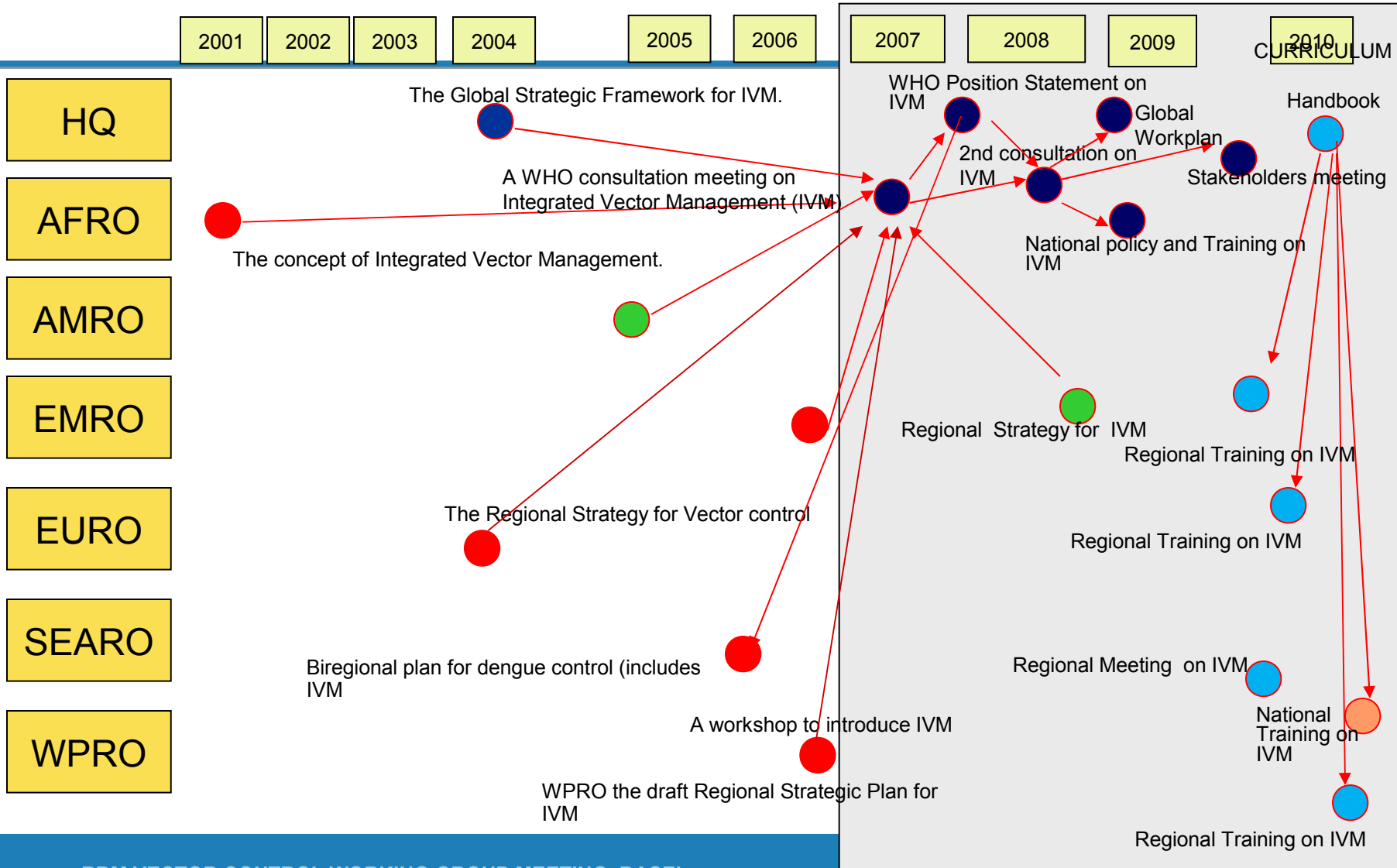
# National policy development for IVM



# A Path from Concept to Actions



# IVM in WHO



**IVM**

**Global Strategic and Action Plan**

# Global Strategic Plan and Action Plan

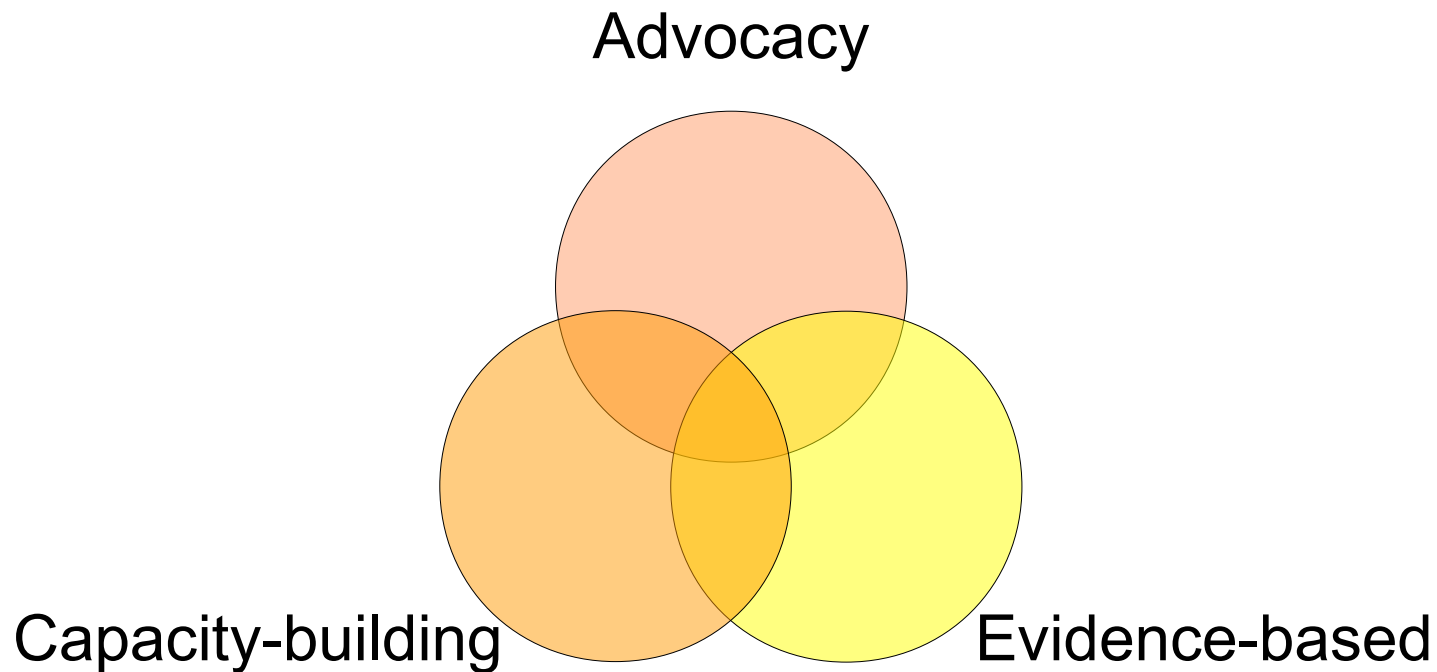
Area 1: Capacity-building and  
training

Area 2: Advocacy and Collaboration

Area 3. Evidence-based decision  
making and integrated  
approach



# Global Action Plan – Three Major Areas of Action



## Area 1: Capacity-building and training

### Expected Result 1. Capacity increased for vector control based on principles of IVM at national, regional and global levels

1. Support development of national infrastructure and career opportunities, and strengthening human resources for planning, implementation and evaluation of IVM and sound management of public health pesticides.
2. Develop guidelines and training documents for implementation and evaluation of IVM and sound management of pesticides.
3. Support resource mobilization for IVM, including community participation, for effective and sustainable delivery of vector control interventions.





## Area 2: Key Elements 2 & 3. Advocacy and Collaboration

### Result 2. Advocacy, social mobilization and legislation framework established in support of IVM within the health and other sectors

1. Develop advocacy plans and promote IVM principles in health policy for NTDs with partners
2. Support the establishment and/or strengthening of policy and legal frameworks for IVM and sound management of public health pesticides
3. Establish or strengthen global and regional collaboration and coordination, exchange of information and rational use of resources and expertise for IVM and sound management of pesticides.



## Area 3. Key Elements 4 & 5. Evidence-based decision making and integrated approach

### Result 3. Evidence-base established and utilized for rational decision making for NTDs and other vector-borne diseases

1. Develop and use mechanisms for monitoring implementation of IVM and sound management of pesticides by Member States
2. Identify operational research needs and develop safe and cost-effective tools and approaches.
3. Formulate evidence-based policies, strategies and promote guidelines for IVM with multi-intervention and multi-disease control approach.



# Advocacy Working Group Meeting Recommendations

- To ensure strong participation of other relevant programmes in WHO/HQ on IVM activities
- To compile and document success stories for IVM advocacy
- Support towards the preparation of the stakeholders meeting
- Resource-mobilization campaign



# Capacity Strengthening Working Group Meeting Recommendations

- Development of core training curriculum on IVM with training modules (based on the Handbook). This will assist the Regions and partner organizations in harmonizing their training materials.
- WHO is requested to facilitate networking, communication and collaboration on IVM between the partner institutions, and to open up conversation with specialists in relevant disciplines, such as ecosystem management, business management and IPM.
- Ongoing efforts to establish a web-based information portal on IVM, with linkages to individual partner websites, need to be accelerated.



# Evidence-based Decision Making and Integrated Approach Working Group

Priority research areas are:

- **Basic biology (mostly of vectors)**
- **One intervention versus multiple diseases**
- **Combinations versus single interventions**
- **Household and community issues**
- **Environmental issues**
- **New technologies**
- **Intersectoral issues**
- **Stratification and decision support**
- **Systems issues (IVM is a platform to strengthen health systems for delivery of vector control interventions)**



# Key activities planned for IVM

- Develop an IVM network
- Further develop database on research institutions relevant to IVM
- Compilation of case studies on IVM
- Consolidate M&E framework for IVM
- Regional and national Training courses
- Collaborate with Global Fund programs where ever possible



# Capacity building for Vector Control

- Long duration Courses
  - Post graduate courses
  - Diploma courses
- Intermediate duration courses
  - In service training
  - Global fund supported workshop
- Short term courses
  - ACTMalaria
  - RTI
- Others –Can distance learning be a reality?



# Role of Entomologist today

- The need:-
  - Planning of programs
  - Implementation
  - Monitoring and Evaluation
  - Quality Control of products
  - Role in malaria elimination
- Skill Requirements
  - Integration of malaria with other programmes
  - Community Vector Control
  - Intersectoral coordination
  - Monitoring and management of insecticide resistance
  - Management of insecticides





# The Challenge:

- Harmonisation of training
- Cascading skills in countries
- Mosquito and vector taxonomy (IHR 2005)
- Career pathway and integration
- Regional expertise and emergency needs
- Management of outbreaks



**Thank you**

**EXPLOITING THE POTENTIAL OF VECTOR CONTROL FOR DISEASE PREVENTION**



**INTEGRATED VECTOR MANAGEMENT**  
is a rational decision-making  
process for the optimal use of  
resources for vector control

