

# **Development of a global action plan for integrated vector management (IVM)**

## **Report of a WHO Consultation**

Geneva, Switzerland

1–3 December 2008





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## Acronyms and abbreviations

ACTMalaria	Asian Collaborative Training Network for Malaria
AFRO	WHO Regional Office for Africa
AMCA	American Mosquito Control Association
AMRO	WHO Regional Office for the Americas
ANVR	African Network on Vector Resistance
EAC	East African Community
EMRO	WHO Regional Office for the Eastern Mediterranean
FAO	Food and Agriculture Organization of the United Nations
GCDPP	Global Collaboration on Development of Pesticides for Public Health
GEF	Global Environment Facility
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HIA	health impact assessment
HR	human resources
IPM	integrated pest management
IPVM	integrated pest and vector management
IRS	indoor residual spraying
ITN	insecticide-treated mosquito net
IVM	integrated vector management
JICA	Japan International Cooperation Agency
M&E	monitoring and evaluation
MoH	ministry of health
NEPAD	The New Partnership for Africa's Development
NGO	nongovernmental organization
NTDs	neglected tropical diseases
RBM	Roll Back Malaria
SADC	Southern African Development Community
SAICM	Strategic Approach to International Chemicals Management
SEARO	WHO Regional Office for South-East Asia
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
WHO	World Health Organization
WHOPES	WHO Pesticides Evaluation Scheme
WPRO	WHO Regional Office for the Western Pacific

## Executive summary

The objectives of the consultation were to develop a global action plan on integrated vector management (IVM), to identify the roles of partners, and to review the status of IVM and develop a guidance document on national IVM policy.

Using the strategic plan on IVM that was prepared during the previous consultation in May 2007, the group identified key actions for strengthening capacity-building, advocacy and collaboration, evidence-based decision-making and integrated approaches. A number of actions to be undertaken within the next three years were proposed. A draft guidance document on policy development, which had been prepared in advance of the meeting, was revised and will be finalized in 2009.

The group reaffirmed the importance of promoting IVM as a cost-effective decision-making process in light of: recent scaling-up of investments for vector control, particularly malaria; renewed concern that climate change could give rise to an increase in vector-borne diseases; the need for more action on the judicious use of pesticides; and opportunities for linking with other sectors, especially agriculture. Activities for advancing the key elements of IVM, including capacity-building, collaboration, advocacy, data sharing and policy formulation, were identified in working group sessions and incorporated into the global action plan. The group agreed on the need to establish an IVM network and a core working group and to convene annual meetings of global stakeholders.

The overall recommendations from the meeting are to strengthen promotion of IVM on the global agenda and to implement the global action plan. Specific recommendations include launching a global advocacy strategy; strengthening capacity through development of a comprehensive modular training package; establishing a network on IVM, to strengthen the evidence base and data-sharing for IVM, including the documentation of case examples; and developing a system for evaluation of IVM.

# 1. Background

Integrated vector management (IVM) is defined as a rational decision-making process for the optimal use of resources for vector control, i.e. a management approach in which:

- decisions are based on evidence and surveillance data;
- there may be several vector control methods addressing single or multiple diseases;
- and
- there is broad participation across sectors and within the community.

Importantly, IVM includes a large component for capacity-building at all levels to implement and monitor these vector control interventions.

WHO promotes the principles of IVM as set out in the 2004 document *Global strategic framework for integrated vector management*,<sup>1</sup> and in 2008 produced a position statement<sup>2</sup> to support the advancement of IVM as a component in vector-borne disease control. Member States are urged to accelerate the development of national policies and strategies after carrying out vector control needs assessment to identify needs, gaps, and opportunities for IVM implementation. In 2007, the World Health Assembly adopted a resolution calling for international organizations and financing bodies to provide support for capacity-building to expand IVM implementation.<sup>3</sup>

In 2007, a global consultation identified five key areas to be addressed within the framework of IVM: advocacy, social mobilization and legislation; intersectoral action; integrated approaches; evidence-based decision-making; and capacity building.<sup>4</sup> This framework is in line with the *Global plan to combat neglected tropical diseases 2008–2015*<sup>5</sup> through delivery of multi-intervention packages that include the promotion of IVM.

The next step – transforming the framework and policies into actual implementation – required the development of an IVM global action plan, including partner roles and responsibilities. To this end, a three-day consultation was convened from 1 to 3 December 2008 in Geneva, Switzerland. The meeting was partly sponsored by USAID through the Integrated Vector Management Project of RTI International.

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<sup>1</sup> *Global strategic framework for integrated vector management*. Geneva, World Health Organization, 2004 (WHO/CDS/CPE/PVC/2004.10).

<sup>2</sup> *WHO position statement on integrated vector management*. Geneva, World Health Organization, 2008 (WHO/HTM/NTD/VEM/2008.2).

<sup>3</sup> Resolution WHA60.18. Malaria, including proposal for establishment of World Malaria Day. In: *Sixtieth World Health Assembly, Geneva, 14–23 May 2007: resolutions and decisions; annexes*. Geneva, World Health Organization, 2007:76–78 (available at [http://www.who.int/gb/ebwha/pdf\\_files/WHASSA\\_WHA60-Rec1/E/reso-60-en.pdf](http://www.who.int/gb/ebwha/pdf_files/WHASSA_WHA60-Rec1/E/reso-60-en.pdf); accessed April 2009).

<sup>4</sup> *Report of the WHO Consultation on integrated vector management (IVM)*. Geneva, World Health Organization, 2007 (WHO/CDS/NTD/VEM/2007.1).

<sup>5</sup> *Global plan to combat neglected tropical diseases 2008–2015*. Geneva, World Health Organization, 2007 (WHO/CDS/NTD/2007.3).



## 2. Meeting participants

Thirty-six participants attended the meeting, including IVM and vector control specialists from all WHO regions except the European Region, experts from WHO, the United Nations Environment Programme (UNEP) and the World Bank, and representatives from training and research institutions, nongovernmental organizations (NGOs), and technical and funding agencies. (A full list of participants is provided in Annex 4.)

Dr Lorenzo Savioli, Director of the Department of Control of Neglected Tropical Diseases, opened the meeting. He noted the increasing need for IVM, in part because of climate change and improvements in intersectoral collaboration, and the growing understanding that sustaining recent public health achievements in vector-borne diseases will require an IVM approach. He also noted that, in addition to its emphasis on malaria, IVM plays a most important role in the control and elimination of the “neglected tropical diseases” (NTDs), including dengue, leishmaniasis, Chagas disease and schistosomiasis.

Dr Sylvia Meek was elected as Chair, Dr Jacob Williams as Co-chair and Dr Michael Macdonald as Rapporteur.

Dr Kazuyo Ichimori provided an overview of the agenda and objectives of the meeting, reiterating the definition of IVM as *a rational decision-making process for the optimal use of resources for vector control* with the five key elements noted in Section 1.<sup>1</sup> The three expected outcomes of the meeting were:

- a final draft of Guidance on national policy development for IVM;
- a draft global operational or action plan; and
- establishment of a network for IVM, with proposals for a coordinating mechanism.

At the start of proceedings, however, participants agreed to develop a global action on IVM for the coming three years, rather than an operational plan.

## 3. Meeting objectives

The objectives of the meeting were:

- to review the status of IVM implementation and identify gaps and needs for translating IVM policy into action;
- to develop, with partners, an IVM action plan based on the those gaps, needs and opportunities;
- to identify areas of the IVM action plan where there are potential roles for partners;
- to discuss and finalize the guidance document on national IVM policy development.

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<sup>1</sup> *Report of the WHO Consultation on integrated vector management (IVM): Geneva, 1–4 May 2007*. Geneva, World Health Organization, 2007 (WHO/CDS/NTD/VEM/2007.1).

## 4. Opportunities for IVM

The rapidly expanding insecticide-treated mosquito net (ITN) and indoor residual spraying (IRS) programmes have dramatically reduced malaria transmission in a number of areas throughout Africa. A surveillance-driven IVM approach is required to achieve the rational use of resources and engage the public, private and community sectors.

The IVM approach is also central to efforts to improve the safety, and manage the judicious use, of current pesticides as well as in the development and deployment of new products. Relevant initiatives include the Stockholm Convention on Persistent Organic Pollutants, the Global Environment Facility (GEF), the Intergovernmental Forum on Chemical Safety, and the Global Collaboration on Development of Pesticides for Public Health (GCDPP).

Ongoing work on health impact assessment (HIA) – for example on the impact of water resources and other development projects – provides opportunities for intersectoral collaboration. Experience in national HIA policy formulation points the way for a similar approach towards IVM policy development.

Responding to climate change emphasizes the need for an IVM approach that builds capacity and works across sectors to improve predictions and decision-making processes, allowing control efforts to adapt to changing disease transmission ecologies.

Agriculture and irrigation sectors are major partners in IVM, with rich experience of methods to empower communities; a prime example of such methods is the Farmer Field School approach to integrated pest and vector management.

Finally, IVM is a decision-making process that includes a “systems-strengthening” component. While integrated vector *control* may simply mix different interventions, integrated vector *management* concentrates on optimizing interventions for a particular setting at a particular time: IVM may include interventions against both a disease *and* its vector and should serve to strengthen the overall health system.

## 5. Research needs

Information on efficacy and cost-effectiveness is at the core of IVM. There is a continual need to build the evidence base to improve understanding of which available tools work where, and to determine how individual methods are in relation to local ecosystems and socioeconomic conditions.

IVM is also based on an understanding of local ecology, including the human element in disease transmission. A change is required from a vertical (donor-driven) approach to a more holistic and interdisciplinary approach, addressing a range of diseases and integrating both entomological and clinical interventions.

Recent evidence on the combination of ITN and larval control indicates a clear additive value of larval control in reducing the risk of malaria infection in some particular situations. Likewise, studies in parts of Asia have shown the incremental effect on malaria of coils and repellents used in addition to ITN. However, more data are needed on the selection of single or multiple interventions in various settings.

Developing new vector control tools and methods depends on national and local capacities for field evaluation. Monitoring and mitigation of insecticide resistance are particularly important elements of the need to improve capacity for IVM. Increasingly there are opportunities for – and examples of – the involvement of schools and communities themselves in data collection for entomological monitoring and evaluation (M&E).

It is often difficult to evaluate and attribute impact in mixed interventions. Modelling studies on vector control intervention coverage and combinations provide a heuristic model that needs to be confirmed by further field studies.

A growing number of training and research institutions and “centres of excellence” are involved with different aspects of IVM throughout five WHO regions. Opportunities exist for links between them to strengthen collaboration for IVM capacity-building, implementation and research.

## 6. Progress in regions and countries

Since the previous consultation in 2007, progress has been made in needs assessment, training and capacity-strengthening in several regions. More countries have conducted needs assessments for vector control and have IVM operational plans, and some have restructured their vector control programmes according to the IVM approach. Strategic plans for IVM are now available in all WHO regions except the European Region.

In the Eastern Mediterranean Region there is political commitment and a policy framework for IVM and many programmes are being restructured. A regional postgraduate training course has been established and there are opportunities for improving coordination and scaling up, both within the region and among the WHO regions.

All malaria-endemic countries of the African Region have an IVM policy; four countries have recently re-established their vector control units and another four have strengthened vector control within the IVM framework. Capacity-building began with regional training in Ghana and Kenya. More than 30 countries have information on vector resistance status, and information management is being coordinated through the African Network on Vector Resistance (ANVR). Projects to improve pesticide management are under way in many countries, especially those with IRS programmes, and at least seven countries have projects to build capacity for vector control.

Countries of the South-East Asia Region have reasonably good health systems with vector-borne disease control programmes and, in some countries, integrated pest management (IPM) experience based in agriculture. Integrated approaches have been applied to diseases such as dengue and kala azar as well as to malaria. A regional IVM strategic plan has been developed

and regional training courses begun. The kala azar elimination programmes in Bangladesh, India and Nepal and the IPVM (integrated pest and vector management) experience in Sri Lanka can serve as a foundation for further IVM expansion.

The Western Pacific Region has a strategic plan for 2008–2015 to promote IVM and improve community health, based on the five key elements. A bi-regional dengue strategic plan that includes IVM was endorsed by the Regional Committees of the South-East Asia and Western Pacific Regions in September 2008. A 10-country workshop has been held in Cambodia, with further information sharing through the Asian Collaborative Training Network for Malaria (ACTMalaria) and its web site.

In the Americas, AMRO recently passed resolution DC48.R8 on “Integrated vector management: a comprehensive response to vector-borne diseases”. Work is ongoing to carry out a regional and national situational analysis and needs assessment, develop guidelines, and build capacity for planning, implementation, monitoring and evaluation. In USA, the State and Federal American Mosquito Control Associations are active and have useful experiences to share.

Country presentations from India, the Philippines, Sudan and Zambia indicated that elements of IVM already exist in these countries. Sudan and Zambia have made recent progress on the assessment of needs, development of IVM policy and plan, and capacity-strengthening. India and the Philippines showed examples of integrated approaches addressing multiple diseases; India has a strong focus on insecticide resistance and bio-environmental studies. The Philippines also showed examples of collaboration between the agriculture and health sectors for promoting judicious use of pesticides and for merging IPM and IVM through the Farmer Field Schools.

Zambia provided examples of malaria control programmes that have “graduated” from vector control operations to an IVM approach. The recent introduction of IVM in Zambia followed WHO guidelines on needs assessment, policy development and planning at the national level. This has resulted in a national programme using the IVM approach that provides plausible evidence of impact on malaria. It was noted that Zambia was been the first country to use its grant from the Global Fund for AIDS, Tuberculosis and Malaria (GFATM) specifically for IVM.

## 7. Partnerships and networks

Stakeholders in IVM include the health, agriculture and environment sectors, civil society, international organizations such as the World Bank, WHO, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), foundations, research and training institutions, the private sector (particularly the pesticide industry trade organizations), NGOs and bilateral technical and funding agencies.

The group reviewed the existing partnerships and networks, such as the Roll Back Malaria (RBM) Vector Control Working Group, and the WHO GCDPP, ACTMalaria, the American

Mosquito Control Association, the Society of Vector Ecology, the Innovative Vector Control Consortium, and the African Network on Vector Resistance. “Alliance management” was discussed, as were common needs for capacity-building, data sharing and synthesis (i.e. turning information into a form suitable for implementation), identifying and coordinating resources, and advocacy.

The group agreed that a network on IVM is needed to coordinate action and enable effective sharing of information and resources, while avoiding duplication with existing partnerships. As a mechanism to initiate the partnership it was proposed to hold annual meetings of a global stakeholder group as a follow-up to the consultation meetings.

In addition, a working group would be developed in support of IVM. This working group would address priority issues, such as training, career development, monitoring and evaluation, research and advocacy. Some specific issues could be addressed in ad-hoc task forces. The establishment of an electronic database and web-based resources and communications on aspects of IVM was also proposed.

## 8. Guidance document on IVM policy

A draft guidance document for IVM policy was prepared in advance of the meeting and discussed in a working group session. Greater emphasis is needed on presenting the concept and justification for IVM, including a description of the steps in policy development and the required generic content of national IVM policy. Expected outputs on policy development with regard to the basic elements of IVM, and steps and activities to achieve this, must be outlined. Guidance is also needed on analysing how linkages can be made with existing policies with relevance to IVM, and which mechanisms for implementation and enforcement of policy need to be in place. The document is being revised and will be finalized in 2009.

## 9. Global action plan on IVM

Four working groups convened to develop the IVM global action plan for the next three years with a focus on: capacity-strengthening, advocacy and collaboration, evidence-based decision-making, and an integrated approach. A fourth group concentrated on finalizing the guidance document on policy development for IVM.

The global strategic plan developed in the first consultation meeting in 2007 (see Annex 1) was used as the basis for development of the global action plan (see Annex 2). Key activities in the existing strategic plan were identified. For each activity, priority products and outcomes would to be developed in the coming years, based on the available information on gaps, needs and opportunities.

Key activities in the areas of advocacy and collaboration are the launching of an advocacy strategy, sensitization of countries for needs assessment, and coordination of activities through annual stakeholder meetings.

A global agenda for capacity strengthening will be developed, including infrastructure, training and human resources; a database on IVM resources will be established, modular curricula on IVM, including pesticide management, will be developed and harmonized, and systematic fundraising will be initiated.

In the area of evidence-based decision-making, a priority research agenda will be developed, guidelines to support decision-making developed and disseminated, case examples of IVM documented, and an evaluation system for IVM developed.

## 10. Recommendations

In conclusion, the meeting reaffirmed the urgency of promoting IVM through an agreed global action plan. Activities to address any shortcomings in relation to the key elements of IVM were identified by the group and have been included in the global action plan. The group agreed on the need to establish a network on IVM, and proposed the development of a working group to initiate annual meetings of global stakeholders.

The meeting concluded with the following recommendations:

1. Strengthen the promotion of IVM on the global agenda.
2. Finalize and implement the global action plan on IVM during the period 2009–2011.
3. Launch a global advocacy strategy on IVM and support national advocacy strategies.
4. Strengthen capacity-building through development of a comprehensive training package, including modules for different purposes and contexts.
5. Establish networking on IVM, including the development of a working group, the initiation of an annual global stakeholder meeting, and the development of a database of partners.
6. Develop a prioritized research agenda to strengthen the evidence base for IVM and promote implementation of key research.
7. Demonstrate and document new case examples of IVM.
8. Develop a system for evaluation of IVM, including an appraisal of existing tools, with indicators and methods for cost analysis.

## *Annex 1*

# Integrated vector management strategic plan to 2010

This strategic plan was developed by the WHO Consultation on IVM held in 2007.<sup>1</sup> It describes priority actions from 2007 to 2010 based on the Global Strategic Framework for IVM.<sup>2</sup> Actions needed to achieve progress across the five key elements of the Framework are identified, and activities at national, regional and global level for each action are listed with expected timeframes. Indicators of achievement of the broad actions will be developed as a priority activity for evidence-based decision-making. Responsibility for the activities lies primarily with ministries of health coordinating other sectors and partners at country level and a range of interested partners coordinated primarily by WHO at regional and global levels.

### *Goal*

To make full use of the power of vector control to improve health by preventing, reducing or eliminating vector-borne diseases.

### *Purpose/primary objective*

To rationalize the use of human and financial resources and organizational structures for the control of vector-borne disease by improving management of vector control through evidence-based decision-making.

### *Indicators*

By the end of 2008, countries have set endpoints for control of their vector-borne diseases, ranging from a stable managed situation with readiness to control epidemics to interruption of the transmission of certain diseases.

By the end of 2010, vector-borne disease-endemic countries have established/strengthened their systems for IVM implementation to effectively reduce, and in some cases interrupt, disease transmission.

By the end of 2010, IVM has been actively implemented in vector-borne disease-endemic countries.

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<sup>1</sup> *Report of the WHO Consultation on integrated vector management (IVM). Geneva, 1–4 May 2007.* Geneva, World Health Organization, 2007 (WHO/CDS/NTD/VEM/2007.1).

<sup>2</sup> *Global Strategic Framework for Integrated Vector Management (IVM).* Geneva, World Health Organization, 2004 (WHO/CDS/CPE/PVC/2004.10).

*Key Element 1: Capacity-building and training*

*Expected result:* Increased capacity for vector control based on principles of IVM at national, regional and global levels.

Action	Level	Activities	Time
1. Support development of national infrastructure and career opportunities and strengthening of human resources for planning, implantation and evaluation of IVM and sound management of public health pesticides.	National	Strengthen national capacity for IVM based on a critical needs assessment, ensuring effective intra- and intersectoral collaboration including review of agriculture, environment, health, in both public and private sectors. Strengthen national infrastructure and capacity for IVM training, networking and developing career opportunities. Create national expert committee, or core group, for IVM, to align and harmonize capacity-building.	By 2010
	Regional	Provide support to countries in developing national policies and strategies for IVM implementation in both public and private sectors. Assess and engage institutional and university networks for IVM training and curricula revision. ACTMalaria model may be explored for other regions.	Ongoing By end 2009
	Global	Create global IVM core committee to guide capacity-building (same as IVM expert group in next section) Promote interregional collaboration.	2007 2007–2010



Action	Level	Activities	Time
2. Develop guidelines and training documents for implementation and evaluation of IVM and sound management of pesticides.	National	Review training resources for IVM and adapt existing modules. Revise curricula and develop appropriate training of trainers.	} 2007–2010
	Regional	Develop guidelines to foster intersectoral collaboration. Develop modules, e.g. economic analysis, project management, pesticide management, community engagement, etc.	By end 2008 By end 2010
	Global	Facilitate web- and CD-ROM-based training resources and distance education. Review and revise guidelines such as cost-effectiveness and health impact assessment.	2007–2010 By end 2008
3. Support resource mobilization for IVM, including community participation, for effective and sustainable delivery of vector control interventions.	National	Ensure IVM is part of national budget not donor-driven. Include capacity-building and community empowerment in GFATM proposals.	By end 2010 2007–2010
	Regional	Review donor priorities, including those of GEF and SAICM. Document success stories.	2007 2007–2010
	Global	Approach donors and private sector for scholarships and training support. Stress that funding for vector control activities should be targeted towards IVM rather than specific diseases.	2007–2008 2007–2010

*Key Elements 2 and 3: Advocacy and collaboration*

*Expected result: Advocacy, social mobilization and legislation framework established in support of IVM within health and other sectors*

Action	Level	Activities	Time
1. Develop advocacy plans and promote IVM principles in health policy for NTDs with partners.	National	Conduct IVM needs assessment. Evaluate and document the economic impact of key vector-borne diseases to stimulate political support. Publish and promote adoption of a national IVM strategy based on results of the needs assessment.	} 2007–2010
	Regional	Develop and launch an advocacy strategy to secure political commitment from senior <i>regional</i> policy-makers and mobilize resources for IVM. Emphasize the essential role of IVM in prevention of vector-borne diseases, using case studies of past and current success stories. Make use of existing regional and sub-regional associations and networks (e.g. in Africa, NEPAD, EAC, and SADC). Facilitate IVM needs assessments in Member countries and document results.	All regions 2008  2008–2009
	Global	Review and refine guidance for IVM needs assessment. Develop and launch an advocacy strategy to secure political commitment from senior international policy-makers and mobilize resources for IVM.	2007 for 2008 2007

2. Support the establishment and/or strengthening of policy and legal frameworks for IVM and sound management of public health pesticides.	National	Prepare, adopt and publish policies required to operationalize the national IVM strategy, including formal creation of a permanent IVM steering committee. Review, adapt and update national legislation and regulations relevant to IVM, as listed above.	2007–2010
	Regional	Convene regional consultations to facilitate national-level review of legislation and regulations relevant to IVM. <sup>1</sup> Add regionally specific modules concerning policy frameworks and legislation to IVM training materials.	All regions 2008–2009
	Global	Develop models for HR structures (post descriptions, career progression, educational and experience requirements, in-service training requirements) for IVM professionals. Identify and document alternative models for institutional arrangements among functional units responsible for IVM and other components of vector-borne disease control. Identify and document alternative models for regulating “pest control operators” and articulate a general strategy to adapt a growing role for the private sector in vector management.	2008–2009
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.	National	Participate in collaborative efforts organized at regional and global levels.	Periodic
	Regional	Document results of the IVM needs assessment process in all six WHO regions. <sup>2</sup> Examine opportunities for regional harmonization (e.g. within SADC) of requirements for registration of public health pesticides and mechanisms for disposal.	2007 and 2009 2008–2009
	Global	WHO to convene a meeting of intersectoral partners (e.g. FAO, UNEP, GEF) to incorporate ideas and develop collaboration across sectors. WHO to establish an IVM expert group to advise regularly on the advancement of IVM principles and practices, including in neglected tropical diseases and malaria. Convene global meetings of IVM stakeholder institutions.	Sep. 2007 Nov. 2007 Periodic

<sup>1</sup> This would include pesticide registration and regulation; public health and sanitation laws; specifications for public health pesticides, application equipment, laboratory equipment and supplies, and other commodities relevant to IVM; tariffs and taxes on public health pesticides, application equipment, laboratory equipment and supplies, and other commodities relevant to IVM; requirements for environmental and health impact assessment; and professional standards and career track for IVM professionals.

<sup>2</sup> AFRO – update report to capture status as of 2007 and again in 2009, EMRO – summarize results as of 2007 and again in 2009, SEARO – summarize results as of 2009, PAHO, WPRO to be determined.

*Key Elements 4 and 5: Evidence-based decision-making and integrated approach*

*Expected result:* Evidence base established and used for rational decision-making for NTDs and other vector-borne diseases

Action	Level	Activities
<p>1. Develop and use mechanisms for monitoring implementation of IVM and sound management of pesticides by Member States.</p>	National	<p><b>Oversight, monitoring and evaluation</b></p> <p>Establish a senior-level intersectoral steering committee to set broad programme goals, assign partner roles and mobilize resources, involving major stakeholders.<sup>1</sup></p> <p>Establish a multidisciplinary technical group to develop M&amp;E procedures.</p> <p>Establish data collection and processing mechanism to receive data and provide systematic and routine analysis and feedback to all levels.</p> <p><b>Pesticides management</b></p> <p>Review and update existing laws and regulations on pesticides management.</p> <p>Establish criteria for the selection of pesticides for vector control.</p> <p>MoH to follow WHOPES guidelines to ensure insecticide procurement, storage, quality control, transportation, application and waste disposal.</p> <p>Institute training programmes to update skills of various handlers and ensure appropriate use of pesticides.</p>
	Regional	<p>Support development of global M&amp;E guidelines and adapt global guidelines to suit regional context.</p> <p>Establish an expert group to provide technical guidance for country-level activities.</p> <p>Publish, and ensure wide dissemination of, best practices/lessons.</p>
	Global	<p>Develop global guidelines to support implementation of IVM at the country level.</p> <p>Establish an expert group to develop evaluation standards and procedures, develop M&amp;E guidelines on IVM and pesticides management, evaluate regional reports, and generate best practices.</p> <p>Convene technical meetings and interregional meetings to consult, exchange information and review progress</p> <p>Review and update national regulations on pesticides management, develop global guidelines and promote existing guidelines.</p>

<sup>1</sup> Ministries of health, education and the environment, local research institutes and universities (public health, biology/zoology, agriculture, engineering, education).

2. Identify operational research needs and develop safe and cost-effective tools and approaches.	National	<p>IVM steering committee to determine research priorities and promote linkages between local and/or regional research institutes and universities.</p> <p>Promote evaluation of new insecticides, formulations, applications and strategies for application.</p> <p>Promote detection and management of insecticide resistance.</p> <p>Encourage the development and assessment of non-chemical control methodologies (mapping, source reduction, social mobilization, mathematical modelling, etc).</p> <p>Strengthen research capacity and encourage interaction between operations and research.</p> <p>Promote analysis of IVM cost-effectiveness across a range of diseases.</p>
	Regional	<p>Regional offices to promote development of research networks and identification of suitable research sites and research organizations for undertaking the work.</p> <p>Regional offices to assist in fundraising for research in IVM.</p> <p>Support workshops, training and conferences to review evidence at national and regional levels.</p>
	Global	<p>WHO HQ to promote development of research networks and assist in fundraising for research in IVM.</p> <p>Expert committee on IVM to review evidence at national and regional levels and make recommendations.</p>
3. Formulate evidence-based policies and strategies and promote guidelines for IVM with multi-intervention and multi-disease control approach.	National	<p>Enhance access to research findings by policy-makers by establishing a mechanism for reporting and interpreting research findings in appropriate language for policy makers.</p> <p>Establish research advisory group or intersectoral committee to prioritize and facilitate research.</p> <p>Enhance consultations with international technical partners.</p>
	Regional	<p>Expert group to review regional situations and generate lessons and guidance on policy development.</p> <p>Develop technical review, position papers targeting statutory bodies (e.g. WHO Regional Committees).</p> <p>Support relevant capacity-strengthening at country level on policy evaluation.</p>
	Global	<p>Enhance global dialogue on policy for enhanced control of vector-borne diseases, particularly vector control (e.g. WHO Executive Board, World Health Assembly, international conferences).</p> <p>Support and disseminate policy evaluations; develop guidance documents and policy briefs, position papers.</p>

Annex 2

Timeline for global action plan on integrated vector management, 2009–2011

Area of action		Key activities		Products		Indicators		
						2009	2010	2011
1	Capacity-strengthening	1	Review and develop a global agenda for capacity strengthening - including infrastructure, training and human resource for IVM	Technical working group on capacity-strengthening established				
				A global agenda set				
		2	Establish database of Institution resources for IVM – including human resource	Database established and maintained				
				Standardized/generic IVM training curricula and modules produced				
		3	Support, develop and harmonize available training curricula and modules for IVM	Quality assurance and accreditation provided				
Workshop conducted								
4	Conduct donor profiles, mobilize financial resources for targeted IVM funding	Donor profile and fundraising conducted						
2	Advocacy and collaboration	1	Develop and launch an advocacy strategy for adoption of IVM as a national policy	Advocacy working group established				
				Advocacy strategy in place				
				National policy available				
2	Make country programmes aware of the importance of needs assessment for the implementation of IVM.	National vector control needs assessment reports and IVM plans produced						
		3	Hold a stakeholders/partnership meeting on IVM for coordination	Annual meeting of IVM stakeholders conducted				
3	Evidence-based decision-making and integrated approach	1	Promote development of priority research agenda and networks on IVM, and assist fundraising	A technical working group established				
				Priority research agenda and plan identified				
				Research networks established				
		2	Develop and disseminate global guidelines to support evidence-based decision-making tool for implementation of IVM at country level	Guidelines developed				
3	Support documentation and dissemination of IVM success stories/case studies	Publication produced and disseminated						
4	Develop tools and guidelines for the monitoring and evaluation of IVM implementation	M&E tools and guidelines developed						

## Annex 3 Agenda

*Monday, 1 December 2008*

09:00–10:30	1. Opening remarks and welcome address	<i>Dr Lorenzo Savioli</i>
	2. Appointment of Chair and Rapporteur	Chair: <i>Dr Sylvia Meek</i> Co-chair: <i>Dr Jacob Williams</i> , Rapporteur: <i>Dr Michael Macdonald</i>
	3. Objectives and adoption of the agenda	
	4. “Where are we?”	<i>Dr Kazuyo Ichimori</i>
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<i>10:30–11:00</i>	<i>Tea/coffee break</i>	
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11:00–12:30	5. Using current opportunities to promote IVM	<i>Dr Jacob Williams</i>
	• Global Malaria Programme (ITN/IRS)	<i>Dr Stefan Hoyer</i>
	• Public Health & Environment	<i>Dr Robert Bos</i>
	• Pesticide management	<i>Dr Morteza Zaim</i>
	Discussion	
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<i>12:30–14:00</i>	<i>Lunch break</i>	
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14:00–15:30	6. Turning research into access to IVM	<i>Professor Steve Lindsay</i>
	• Durham University	<i>Professor Steve Lindsay</i>
	• Centers for Disease Control and Prevention	<i>Dr Robert Wirtz</i>
	• International Centre of Insect Physiology and Ecology	<i>Dr John Githure</i>
	• Liverpool School of Tropical Medicine	<i>Professor Janet Hemingway</i>
	• London School of Hygiene & Tropical Medicine	<i>Dr Nigel Hill</i>
	• Noguchi Memorial Institute	<i>Professor Daniel Boakye</i>
	Discussion	
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<i>15:30–16:00</i>	<i>Tea/coffee break</i>	
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16:00–17:30	7. Turning policy into realities	<i>Dr Chusak Prasittisuk</i>
	Part 1: Regional and country progress	
	WHO Regions	
	• WHO African Region	<i>Dr Birkinesh Ameneshewa</i>
	• WHO Region of the Americas	<i>Dr Christian Frederickson</i>
	• WHO South-East Asia Region	<i>Dr Chusak Prasittisuk</i>
	• WHO East Mediterranean Region	<i>Dr Abraham Mnzava</i>
	• WHO Western Pacific Region	<i>Dr Chang Moh Seng</i>
	Discussion	
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<i>18:00</i>	<i>Reception in cafeteria, main building</i>	
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*Tuesday, 2 December 2008*

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09:00–10:30	7. Turning policy into realities Part 2: Successes and failures	<i>Dr Henk van den Berg</i>
	<ul style="list-style-type: none"><li>• India</li><li>• Philippines</li><li>• Sudan (Khartoum)</li><li>• Zambia</li></ul>	<i>Professor Aditya Dash</i> <i>Mr Ferdinand Salazar</i> <i>Dr El Fatih Mohamed Malik</i> <i>Mr Chadwick Sikaala/</i> <i>Mr Emmanuel Chanda</i>
	Discussion	

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10:30–11:00		<i>Tea/coffee break</i>
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11:00–12:30	8. Turning planning into partnerships	<i>Dr Robert Bos</i>
	<ul style="list-style-type: none"><li>• AMCA</li><li>• FAO: IPM/IVM</li><li>• Bill &amp; Melinda Gates Foundation</li><li>• JICA</li><li>• Malaria Consortium</li></ul>	<i>Dr Major Dhillon</i> <i>Dr Hank van den Berg</i> <i>Dr Kathryn Aultman</i> <i>Mr Ikuo Takizawa</i> <i>Dr Sylvia Meek</i>

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12:30–14:00		<i>Lunch break</i>
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14:00–15:30	<ul style="list-style-type: none"><li>• USAID</li><li>• RTI</li><li>• World Bank</li></ul>	<i>Dr Michael Macdonald</i> <i>Dr Jacob Williams</i> <i>Mr Aziz Lagnaoui</i>
	Discussion	

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15:30–16:00		<i>Tea/coffee break</i>
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16:00–17:30	9. Plenary discussion: establish IVM network	<i>Dr Sylvia Meek/Dr Jacob Williams</i>
	10. Framework for group discussion (plenary)	<i>Dr Michael Macdonald</i>
	a. Finalize <i>Guidance on policy development for IVM</i> (outline)	<i>Dr Cliff Mutero</i>
	b. Draft global action plan (outline)	<i>Dr Abraham Mnzava</i>

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Wednesday, 3 December 2008

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09:00–12:30	11. Group work	
Tea/coffee will be served outside Room M-505 from 10:30 to 11:00	<i>Group a: Room L-374</i> Finalize <i>Guidance on policy development for IVM</i>	<i>Dr Cliff Mutero</i>
	<i>Group b-1: Room M-505</i> Draft global action plan; Key Element 1, Capacity-building	<i>Dr Abraham Mnzava</i>
	<i>Group b-2: Room M-205</i> Draft global action plan; Key Elements 2, 3, Advocacy and collaboration	<i>Dr Raman Velayudhan</i>
	<i>Group b-3: Room L-358</i> Draft global action plan; Key Elements 4, 5 Evidence-based decision-making and integrated approach	<i>Dr Birkinsh Ameneshewa</i>
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<i>12:30–14:00</i>	<i>Lunch break</i>	
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14:00–15:30	12. Report back and discussion in plenary	<i>Dr Michael Macdonald</i>
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<i>15:30–16:00</i>	<i>Tea/coffee break</i>	
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16:00–17:30	13. Recommendations and conclusion	<i>Dr Sylvia Meek, Dr Kazuyo Ichimori</i>
	14. Closure	

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Annex 4

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