

# APMEN

## Vector Working Group (VcWG)



### Background

Malaria transmission rates and risks can be greatly reduced by vector control, mitigating high malaria incidence and prevalence rates. However despite national and global efforts to control malaria, the disease burden remains high. Vector control remains the most generally effective measure to prevent malaria transmission. The principal objective of vector control is the reduction of malaria morbidity and mortality by reducing the levels of transmission. Vector control methods vary considerably in their applicability, cost and sustainability of their results.

The need to review the current vector control strategies, interventions and their effectiveness in various operational and eco-epidemiological settings is a key focus for the Asia Pacific Malaria Elimination Network (APMEN). This also includes identifying the challenges for implementation in the different country programs

In order to make recommendations compatible with best practice and the latest research findings, the APMEN Vector Control Working group (VcWG) requires a detailed understanding of what the Country Partners are currently doing. VcWG aims to be able to design indicators for data collection and provide support for operational research that will focus on epidemiological situations where the present interventions are not being effective.

Another aspect that the VcWG deems important is that despite the fact that vector control such as, long lasting insecticidal nets (LLIN) and Indoor Residual Spraying (IRS) constitute major components of elimination strategies many malaria programs lack qualified entomologists and or vector control specialists.

### The Aim of the Vector Working Group Working Group (VcWG)

#### **Objectives:**

- To advocate for the level of vector control capacity at regional and country level required to attain and maintain malaria elimination.
- To stimulate and where possible coordinate operational research on questions directly related to intensified malaria control and elimination.

## Members

The working group will consist of representatives from the APMEN Country Partners National Malaria Control Programs, research institutions, WHO and the APMEN secretariat. Members participate as volunteers. A chair will be elected from the group for a one year term.

Each APMEN Country Partner is expected to contribute to the information sharing which will provide the departure point for the VcWG. The working group will coordinate the collecting of information and implementation activities and disseminate reports and progress updates to the Country Partners via the Secretariat.

<b>Country Representatives</b>	
Sri Lanka	Rabindra Abeyasinghe
Malaysia	Hasan B. Abdul Rahman
Vanuatu	George Taleo
Solomon Islands	Albino Bobogare
<b>Research Institutions</b>	
CDC	Tom Burkot
Pacific Malaria Initiative Support Centre	Kevin Palmer
WHO Philippines	Jeffrey Hii
WHO- Vanuatu	Moh Seng Chang
CDC seconded to UNICEF	William Hawley
ACTMalaria	Cecil Hugo
AFRIMS	Jetsumon Prachumsri
<b>Secretariat</b>	
UQ	Arna Chancellor

### **Partners:**

Collaboration with other partners will ensure that knowledge generated by VcWG will be synthesised and interpreted within the wider context of regional malaria control programmes and associated stakeholders. Identified key partners include but are not limited to:

WHO  
CDC  
ACTMalaria  
AFRIMS

## Communication Strategy

Communication activities will include:

- Annual meeting timed to coincide with the APMEN annual Business and Technical Meeting.
- Six monthly bulletins to: VcWG members, member countries and the APMEN Board and key partners and stakeholders. These will consist of updates on activities of the group, funding of projects and any final reports from funded projects.
- Travel budget permitting the VcWG will conduct one face to face meeting in 2010 and all remaining communication will be through telecommunications (email, video and telecon) and news bulletins. Opportunistic meetings may occur at major international conferences.
- The APMEN website will be updated regularly with VcWG activities for view by APMEN members, colleagues in endemic countries, research community, media and general public.
- Online provision of reports, publications, and resources.

## Governance

The VcWG annual report and proposed yearly work plan will be presented to APMEN Network for review and approval. An evaluation of the governance and coordination process and activities will be reviewed by Network eighteen months after inception.

## Priorities

At the Vector Control Working Group round table meeting in Colombo, Sri Lanka (14-15<sup>th</sup> February 2010) discussions and priority areas were established for 2010 (see Appendix I).

## Funding

The VcWG has an annual indicative budget of AUD\$216,000 to support various projects that will be required to meet its objectives. These costs tentatively include economy travel to Manila for a one off meeting and the economy travel costs (including per diem and accommodation based on UQ rates) to source additional information from all country partners.

## Year 1 Deliverables

1. Define the role of entomology and entomologists in malaria elimination, including vector control policies and activities, existing initiatives and partners involved
2. Compile inventories
  - Entomologists and vector control specialists in both the public and private sectors
  - Training institutions
  - Training materials
  - Research institutions and their research agendas/interests/strengths
  - Strategies being used including effectiveness of alternative methods such as repellents, environmental management, window screen, curtain etc.
3. Review methodologies
  - Critically evaluate current surveillance methods/tools
  - Survey/Literature review
  - Advocate/stimulate new technologies
4. Commence collation of existing information on malaria vectors including; habits, transmission potential and resistance to insecticides
  - Existing knowledge
  - Map distribution
  - Identify gaps and recommend further research

## YEAR 1

Work Plan Activities	Date
<b>Establish Identity and Work Agenda</b>	
Convene first meeting of vector working group and report to Network, and prepare written document	Feb 2010
Produce a consensus document laying out the VcWG Terms of Reference, governance and work plan	April 2010
Establish mechanism to further obtain and collate information	April 2010
<b>Research Activities</b>	
Review current vector programs activities, entomological services vector surveillance and control systems at the country and regional levels in APMEN countries. Through literature review and survey and possible visits to obtain more in-depth information.	June-July 2010
Identify existing knowledge gaps in the effectiveness of vector control interventions /combinations of interventions, management, and surveillance of <i>P. vivax</i> and define operational research priorities for 2011.	June-October 2010
Vector WG meeting (possibly face to face) to identify gaps and prioritize research for 2011 ( to be decided at time of analysis above)	September-October 2010
<b>Capacity Building</b>	
Undertake entomologist work force review and compile training inventories.	April-October 2010
<b>Reporting Activities</b>	
Short report on Operational Research Priorities for vector control to support intensified malaria control and elimination in the Asia Pacific Region for 2011. May be a publication.	November –December 2010
Provide six monthly updates on working group progress	Ongoing

## Appendix I

### Vector Working Group Areas of Priority

These priorities were identified by the Vector Working Group panel at round table discussions at a meeting in Colombo, Sri Lanka on the 14-15<sup>th</sup> February 2010

Area	Notes
<b>Area1. Capacity Building: Entomologists</b>	
Analysis of Current roles 2010	Define the rolls and skills of the entomologists in the Vivax and elimination contexts Identify what needs to be changed
Inventory of vector control specialists 2010	From the region From both public and private sectors Based on survey
Compile list of training institutions 2010	Collate a comprehensive list of all the relevant individuals/organizations in each country , in the Asia Pacific region including contact with WHO, Ministries, Research organizations and universities Based on survey
Compile list of trainers and facilitators 2010	Once compiled to be disseminated Based on survey
Curriculum development including linking with Act Malaria and WPRO/SEARO and national country malaria annual plans	Review and provide support for changes in existing training courses  Assist in development of training modules – peer review  Provide facilitators for international and national level training
Preparatory work for a review of training of new entomologists and /technicians. This work would link with ActMalaria and WPRO/SEARO and national country malaria annual plans and be undertaken in 2011	Technicians at Bachelors or Diploma level Medical entomologists at Masters or PHD level
Preparatory work on the retraining of existing entomologists and /technicians. This work would link with ActMalaria and WPRO/SEARO and national country malaria annual plans and be undertaken in 2011	Short courses to update knowledge and skills
<b>Area 2. Basic Biology</b>	
Ongoing work towards defining the transmission dynamics of <i>P. viva</i> The major component of this work will be undertaken in 2011	How it might differ from <i>P. falciparum</i> , and the potential impact on vector control for elimination

Evaluate possible changes in vector behavior The major component of this work will be undertaken in 2011	Focus on situations of low or zero malaria transmission
<b>Area 3. Review of Methodologies</b>	
Compile existing information on malaria vectors – habits, transmission potential and resistance to insecticides from full coverage of interventions to no vector control (just surveillance and outbreak response in low transmission areas).	Existing knowledge Map distribution Link to MAP project Collect all National Malaria Control Plans and Country National Vector Control Strategies Monitoring and evaluation indicators for national vector control strategies  Based on survey results
Design of a Questionnaire/checklist to be send to relevant individuals/bodies and Country Partners	Collate a comprehensive list of all the relevant individuals/organizations (WHO, Ministries, Research/Uni)in each APMEN country partner and within Asia Pacific region to contact
Review the collected and existing information on Malaria vectors	Identify gaps and recommend further areas where information is required to be obtained Engage a Research assistant to support this work
Identify gaps in knowledge – determine need for in country follow up	Explore possibility of WPRO /SEARO /Dr Dash funding that comes under integrated vector management Based on analysis in May-August
Explore need for Research Assistant /Student / APMEN fellow to collect this information from country partners and /or to explore gaps in this information	See above
Document areas for 2011 for research	Draft document on vector control operational research priorities for elimination in the Asia Pacific
<b>Area 4. Information on new technologies</b>	
Source information on new technologies research undertaken by others including: <ul style="list-style-type: none"> <li>• Bed net measures</li> <li>• Repellents(, Eijkman use of personal insect repellent(Work in Indonesia)</li> <li>• environmental management</li> <li>• window screen/curtain</li> </ul>	Potentially in 2011 APMEN countries may be identified as future field sites in others research.