Welcome to issue eight, the special vector control issue of the APMEN newsletter. In these pages, you will receive news and updates from the APMEN Vector Control Working Group. We encourage you to circulate this publication to colleagues.

New Chair and Co-Chair of Vector Control Working Group

APMEN welcomes Dr Moh Seng Chang as the new Chair of the Vector Control Working Group (VcWG). Dr Chang has been based in Malaysia since recently retiring as Regional Entomologist with the World Health Organization (WHO), Regional Office for Western Pacific Regional Office in Manila, Philippines. Dr Chang will take the helm of the Vector Control Working Group with almost 40 years’ experience in vector control and field entomology. Dr Chang is looking forward to the new challenge that APMEN can offer in the area of vector control for malaria elimination settings in the Asia Pacific region.

Dr Moh Seng Chang will be joined by Dr Hugo Bugoro as the Co-chair of the Vector Control Working Group. Dr Bugoro is currently working as technical advisor for vector control within the National Vector-Borne Disease Control Programme in the Solomon Islands. Dr Bugoro has recently completed his PhD in July, 2011 at the National Yang Ming University in Taiwan on Bionomics of Anopheles farauti and prospects for malaria elimination in the Solomon Islands. His current role is to provide assistance and advice on vector control issues, planning and implementation. Dr Bugoro has extensive experience conducting field based research and recently completed a series of country-wide trials indicating that Long Lasting Insecticidal Nets (LLINs) and Indoor Residual Spraying (IRS) will be insufficient to eliminate malaria. Dr Bugoro is looking forward to working alongside Dr Chang and providing technical expertise specific to malaria elimination in the Pacific to the Vector Control Working Group.

Thank-you to Dr Alongkot Ponlawat

APMEN acknowledges the important contributions of the outgoing Chair of the Vector Working Group, Dr Alongkot Ponlawat. APMEN would like to acknowledge the dedication of Dr Ponlawat and note the challenge of combining his role as Chief in the Vector Biology and Control Section at Armed Forces Research Institute of Medical Sciences (AFRIIMS), whilst concurrently undertaking the role as chair of the VcWG. Dr Ponlawat will continue to remain engaged in the Working Group, particularly in the development of High resolution photography and pocket book (see article over page).
The Vector Control Working Group recently held its annual meeting in Incheon, Republic of Korea from May 6-7, 2012. The meeting provided participants with an important stage to share information, discuss new research and in-country activities, and ultimately decide on future funding allocations and overall strategic direction for the Working Group. Overall the meeting was evaluated as a success. Topics discussed included depth conversations pertaining to draft literature reviews presented on larviciding and the use of repellents, future planning and task allocation required to complete a literature review on environmental management, the development of a Standard Operating Procedure manual on Indoor residual spraying, an update on both outdoor malaria transmission and insecticide resistance monitoring, a group discussion on the need for elimination specific capacity building and the launch of the new global multi-vector map from the Malaria Atlas Project. From this agenda, the group identified information sharing, capacity building, operational support tools, operational research and advocacy tools as its main priorities for the future.

The meeting was attended by over 20 people from APMEN Country Partners, Partner Institution and observers, representing more than 10 countries. This year, the APMEN Vector Control Working Group was happy to welcome some new participants; firstly, Dr Chea, representative from APMEN’s newest Country Partner, Cambodia, and Dr MRSS Bandara and Dr Asik Surya, the vector representatives for Sri Lanka and Indonesia respectively. APMEN would like to thank everyone that attended and participated in this year’s Vector Control Working Group annual meeting, with a special thanks to Dr Krongthong Thimasarn who attended on behalf of WHO/SEARO.

The Vector Control Working Group was privileged to have Colonel Terry Klein (PhD), a retired Regional Emerging Infectious Disease Consultant, 65th Medical Brigade give an interesting presentation on Vivax Malaria in the Republic of Korea: Trends and health implications for US military and civilian populations during the recent meeting in Incheon. Col Klein’s presentation was insightful and timely for the APMEN IV DMZ study tour; he gave a brief history of Malaria in the Republic of Korea and discussed the diseases re-emergence in the 1990’s. Col Klein’s presentation illustrated despite relatively low rates of transmission, the Republic of Korea still faces significant and unique cross boarder challenges before it will be able eliminate Malaria on a national level.

The Vector Working Group would like to take this opportunity to thank Col Klein for his presentation at the Incheon meeting, and looks forward to further engagements with Col Klein in the future.
High Resolution Photography and Pocket Book

Outgoing VcWG chair, Dr Alongkot Ponlawat and the team at AFRIMS are currently working in collaboration with the APMEN Vector Control Working Group to develop a high-resolution photographic database tool that will identify the key characteristics, genera and species of each malaria vector within the Asia Pacific region. Complementing the photographic database, APMEN will collaborate in the development of a pocket-sized malaria vector guide for field entomologists and collectors within the Asia Pacific region. The pocket guide aims to assist field workers to identify specific vectors and their characteristics in the field without having to take a sample back for laboratory analysis. In the future it is hoped that these two complementary tools will be utilized by APMEN partners that may have questions regarding the identification and/or characteristics of specific vectors. Partners will soon be able to send/email the high-resolution pictures to AFRIMS and/or other taxonomists to remotely identify the sample species (without having to send the actual vector sample).

In order to develop a full and complete database, AFRIMS are in the process of collecting vector samples from a variety of different settings within the Asia Pacific region. APMEN and AFRIMS invite APMEN Country Partner representatives to send samples of the following species along with a PDF copy of the identification key which is normally used to identify these species to Dr Alongkot Ponlawat at AFRIMS. The mosquito samples remaining to be sent are: An. anthropophagus; An. balabacensis; An. farauti; An. flaviostris; An. fluvialitis; An. koliensis; An. lasteri; An. leucosphyrus; An. litoralis; An. mangyanus; An. meseae; An. punctutatus; An. Sinensis.

The samples should be of a high quality and it would be greatly appreciated if 3-4 samples per species could be forwarded to Dr Ponlawat at AFRIMS as soon as possible.

Please send all samples to:

Dr Alongkot Ponlawat
315/6 Rajavithi Rd.
Department of Entomology
USAMC-AFRIMS
Bangkok, Thailand 10400

For any enquiries about how to package the samples or any other general enquiries about the project, please feel free to contact Dr Ponlawat at alongkotp@afirms.org
Update on Vector Control Working Group Activities

In 2010 and 2011, the Working Group undertook a series of situational analyses activities to provide the foundation for any dissemination, capacity building and applied research work by the Network. This was done in order to address the need for quality vector management and entomological approaches and skills in countries who have identified malaria elimination as a national or sub-national objective. The activities included developing:

- An inventory of vector control activities in each of the APMEN country partners including analysis of human resource needs (addressing the strategic questions of:
  - What vector control tools APMEN countries are using; how are these tools selected and how are they being used in the context of malaria elimination?
  - What else is needed to eliminate the remaining low-levels of transmission?
  - Are there any data to indicate what methods are working or not working?
  - What are the challenges (technical and operational) facing the use of vector control interventions for elimination available in Asia-Pacific region?
- An inventory of training available in field entomological skills within the region/partner institutions
  - Are there enough opportunities in the region to train programme staff in vector control and entomological skills? If not, what role should APMEN play to stimulate/provide this training?"
- A review of innovations in vector control and discuss potential suitability for elimination environments
  - Do we know enough about the use of larviciding as a vector control method in elimination environments to provide technical support to APMEN partner countries? If not, what role should APMEN play to develop/operationally research/strengthen this knowledge and evidence base?"
  - “Do we know enough about the use of personal repellents as a vector control method in elimination environments to provide technical support to APMEN partner countries? If not, what role should APMEN play to develop/operationally research/strengthen this knowledge and evidence base
- A review of manuals, standard operating procedures and guidelines available for various aspects of vector control, evidence of effectiveness and assess suitability of elimination environments

Larviciding Literature Review

An activity listed in the 2012 APMEN work plan by the Vector Control Working Group was to complete three literature reviews and publish the papers online. The Vector Control Working Group is pleased to announce that the literature review on larviciding has now been complete, and is now available on the APMEN website (www.apmen.org/vector). In total, the paper identified a total of 347 articles, books, and manuals (12), of which 117 met the inclusion criteria. Based on this review, the Working Group believed there are some specific operational questions to be answered in the Region in elimination environments and will be developing the protocols for this work over the next few months to be supporting in a few countries who are interested.

APMEN would like to make a special acknowledgment to Julie Thwing and Lucy Tusting, with the support of the Centers for Disease Control and Prevention Library Services, the London School of Hygiene and Tropical Medicine Library Services, the Armed Forces Pest Management Board Literature Retrieval System, the World Health Organization Library and Archives Service, and the Cochrane Infectious Diseases Group whom willingly shared their library database which was developed to undertake a Cochrane review of vector control.
Formation of the Working Committee for Entomology Training Specific to an Elimination Setting

A pre-circulated paper discussing the different types of entomology training offered within the Asia Pacific region was distributed to all Vector Control Working Group members prior to the meeting in Incheon. The paper identified numerous training provided for entomologists in the 11 APMEN countries, as well as any opportunities outside of APMEN countries that accept international candidates. Many of the training programs are poorly publicized and also had an overall general lack of training specific to malaria elimination. (Paper can be viewed at www.apmen.org/vector)

Further discussions about the lack of training offered specific to an elimination setting continued on at the meeting, and it was soon recognised that this oversight in capacity building was a major issue. The Vector Control Working Group decided to form a working or subcommittee to identify one or several partner institution training facilities that have the capacity to offer such training, and to develop curriculum for a course specific to the elimination setting. This group has been busily working away since the conclusion of the meeting, and we are expecting a draft curriculum to be available during September, 2012.

Environmental Management Manuals

During the recent APMEN Vector Control Working Group meeting in Incheon, the Working Group discussed and reviewed its information sharing activities within the Network. As part of this, a brief review of seven APMEN Country Partner Environmental Management activities were presented as reported in the APMEN Vector Control survey (available at www.apmen.org/vector). Country Partner's present agreed to forward copies of non-accessible environmental management manuals to the APMEN Secretariat to ensure that this type of important, grey literature is included for the planned review. If you have already sent these through, we appreciate your commitment. If the manuals are available electronically, please send them to apmen@sph.uq.edu.au, or alternatively, please post them to: APMEN Joint Secretariat (UQ) Office, School of Population Health, Room 305, Edith Cavell Building, Herston Road, Herston, Qld, 4006, Australia.