

Asia Pacific Malaria Elimination Network (APMEN)

Inaugural Meeting Notes

February 9-11, 2009

Session	Key Comments / Discussion
Opening Remarks	<p>Bob McMullan Welcomed the group on behalf of the Australian Government. Conveyed support and enthusiasm for malaria elimination efforts in the region. Urged participants to take on a role of leadership and advocacy to maintain momentum and focus on malaria elimination.</p> <p>Richard Feachem Set the scene for the meeting's discussions: There are over 100 malarious countries in the world today. Of these, 39 are on the path to malaria elimination. Ten of these are in the Pacific Region: Bhutan, Sri Lanka, Malaysia, North and South Korea, China, Philippines, Indonesia, Solomon Islands and Vanuatu. These are the founding members of the APMEN. These countries are diverse but have in common a commitment to eliminate malaria and an interest in <i>P. vivax</i> (a parasite that is neglected in other parts of the world). In time, other countries in the region will join APMEN, and there will also be "graduating alumni" to join the now malaria-free states such as Taiwan and Japan. In October 2007, Bill and Melinda Gates called for the global eradication of malaria. This may be a 4-5 decade endeavour. The strategy is:</p> <ol style="list-style-type: none"> 1. Aggressive control in the heartland countries 2. Progressive elimination from the natural margins of malaria to "shrink the malaria map" 3. Research to bring forward better tools for diagnosis, treatment and prevention <p>Our focus is on shrinking the map in the Asia Pacific region. A vision for the function and structure of APMEN should be developed over the coming days.</p>
Session 1	<p>Eva Christophel Presentation: Regional Overview of Malaria Elimination in the Western Pacific Region – History and Current Situation [See slide presentation]</p> <p>Krongthong Thimasarn Presentation: Updates on Malaria Elimination in South-East Asia Region [See slide presentation]</p> <p>Comments from Open Forum Discussion</p> <ul style="list-style-type: none"> • The Global Fund has no bias against elimination and will support reasonable proposals. • How useful are the WHO milestones for deciding how ready a country is for elimination? Although Bhutan has few cases, they are considered to be in the control phase as their population is low and the incidence is >1/1,000. Although the WHO notes that these indicators are meant to be indicative, these milestones and the language associated with them may not be helpful to countries. Perhaps revised milestones/indicators for elimination preparedness are needed. • APMEN could potentially have a role as a mechanism for a single source of quality data collection and mapping. • Case reporting mechanisms in many developing countries require support and development. • We do not have a scientific body of evidence to support IRS (indoor residual spraying) in addition to long lasting insecticide treated nets (LLINs).
Session	Cristina Galang

2	<p>Update on Malaria Elimination in the Philippines [See slide presentation]</p> <p>Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • Private laboratory services are being provided in the clinics. • IRS is used if there is no decrease in malaria cases for a year despite high insecticide treated bednet (ITN) coverage. • For the malaria-free provinces, a prevention of reintroduction strategy is in development. • Village health workers will do patient follow-up with regards to DOT (directly observed treatment). • Community mobilisation structure at community level: midwives and community leaders are highly involved in the program specifically for vector control (bed nets & IRS). • Reporting of data: Data comes from the village level, analysis is carried out at the municipality level, and validation is done centrally. <p>George Taleo Update on Malaria Elimination in Vanuatu [See slide presentation]</p> <p>Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • There is an increasing gradient of endemicity as you travel north from Tafea (the first province being targeted for elimination). <p>Albino Bobogare Update on Malaria Elimination in Vanuatu [See slide presentation]</p> <p>Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • Isolation of Temotu province and diversity in population (>80 languages) creates challenges for elimination. <p>Comments from Open Forum Discussion</p> <ul style="list-style-type: none"> • Challenges exist with cross border malaria transmission (i.e. imported cases from Indonesia in the Philippines) and hence it will be vital to work together on solutions. • There is a theme that eliminating <i>P. falciparum</i> will be easy. This may not be the case in tropical countries. • Parasite hunting is dependent on a strong health system but it is important to recognise that this is not the only requirement. • It is important to leverage the non-public sector, some examples include: the public-private partnership of Philippine Movement Against Malaria, Save the Children in Melanesia, the tourism industry's involvement in malaria efforts in Phuket, Thailand. • It would be helpful to identify and map the collaborators in the region.
Session 3	<p>Linhua Tang Update on Malaria Elimination in China [See slide presentation]</p> <p>Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • Mass drug administration (MDA) is used in outbreaks and in areas of high prevalence to achieve rapid reduction in transmission. Not recommended for low transmission areas as community participation is difficult under these circumstances. Spring Treatment with 8 days of primaquine is also used as MDA anti-relapse therapy, sometimes given to contacts of cases or an entire village.

	<ul style="list-style-type: none"> • ACT (artemisinin-based combination therapy) is not used for vivax malaria. Chloroquine and primaquine are effective and more economical. Also, ACT does not eliminate the parasites in the liver. • Strategy for community participation: there are local and provincial systems in place for community education, feedback and surveillance. • To prevent relapses, primaquine is used for 8 days. • China has a wealth of malaria data and knowledge, which is unknown to the greater malaria community due to challenges of publishing in English. <p>Krongthong Thimasarn Update on Malaria Elimination in DPR Korea [Slides not available]</p> <p>Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • Some detailed data from DPR Korea cannot be released. • Mass prophylaxis with primaquine is performed for all members of the at-risk population, except pregnant women and children. Recently, primaquine was administered to 5 million people. No adverse effects were reported; <2-3% experienced mild haemolytic reactions. • There was previously a suspension of the relationship between Global Fund and DPR Korea. However, DPRK’s R8 proposal was approved; a principal recipient needs to be identified. • The re-emergence of malaria in DPRK points to the need for countries to consider issues of surveillance and sustainability. <p>Jun-Wook Kwon Update on Malaria Elimination in Republic of Korea [See slide presentation]</p> <p>Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • Cross-border collaboration is a key strategy • No severe cases of vivax have occurred, perhaps due to early diagnosis. • The use of satellite imagery, GPS/GIS (Global Positioning System/Geographic Information Systems), and a web based surveillance system allows for efficient use of limited resources. • When malaria re-emerged after 20 years of absence, processes for surveillance, prevention and management of malaria had to be reactivated. Stakeholders came together (including the private health care system) and developed a strategy. It was challenging as there were few domestic experts, but they were able to call upon international experts including the WHO for assistance. <p>Comments from Open Forum Discussion</p> <ul style="list-style-type: none"> • Attitudes and experiences with primaquine vary greatly in the region. There is a need to capture all the experiences of primaquine use and come to consensus on when and how it should be used.
Session 4	<p>Rabindra Abeyasinghe Update on Malaria Elimination in Sri Lanka [See slide presentation]</p> <p>Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • Lessons from Sri Lanka’s experience in the 1960s/70s: withdrawal of services after near-elimination led to reintroduction of malaria. In countries with tropical climates where the vectors will remain, you can’t drop your guard. Sustained and enhanced surveillance is necessary to prevent reintroduction. • The significant drop in malaria cases in 1999 was due to a shift from a single insecticide to

	<p>multiple insecticides in order to more effectively control vector densities. Also, there was a change from a 5-day primaquine regime to a 14-day primaquine regime.</p> <ul style="list-style-type: none"> • Utility of RDTs has dropped considerably now that vivax malaria represents 97% of all cases. • In conflict areas, <i>Pv/Pf</i> ratios are the same as in non-conflict areas. • Prevalence of G6PD deficiency is about 5-7%, due to intermarriage. Primaquine is only used with confirmed cases. • A future lifting of the current naval blockade between India and Sri Lanka may lead to increased transmission. • In terms of cross border collaborations, one between Sri Lanka and Tamil Nadu might help, but in South India, rates are low. <p>Rita Kusriastuti Update on Malaria Elimination in Indonesia [See slide presentation]</p> <p>Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • Village midwives occupy some malaria posts, however, the majority of malaria posts are occupied by trained village volunteers. • The malaria program for pregnant women is integrated with antenatal care. • The strategies for pregnant women are the same in low endemic/elimination sites as they are in high endemic areas. <p>Hasan B. Abdul Rahman Update on Malaria Elimination in Malaysia [See slide presentation]</p> <p>Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • All cases of <i>P. malariae</i> are sent for PCR (polymerase chain reaction) to a medical research facility. • 1.1 million legal migrant workers are screened at the border every year. <20 cases are detected. Cost effectiveness analyses have not been done. • It will be a challenge to eliminate malaria if there is no screening of illegal immigrants. • When illegal immigrants access health care, health staff are required to report them but in practice they often do not. • Malaysia has not switched to ACT as first line therapy for <i>P. falciparum</i>. They are still using chloroquine.
<p>Session 5:</p>	<p>Graham Brown Presentation - Lessons from Day 1</p> <p>Presentation/Open Forum Discussion</p> <ul style="list-style-type: none"> • Bob McMullan’s call to action highlighted four areas: science, resources, leadership, and advocacy • Meeting participants agreed on the WHO definition of elimination and eradication. • There was some discussion on the appropriateness/usefulness of the phases and milestones proposed by WHO. The guidelines provide a framework, a model to assist with country planning. They provide the international community and donors with some clarity on which to hang the decision making process. The guidelines show when and how elimination might be possible. However, there are many grey areas and the phases are not always clear cut. This model was also criticised as being overly simplistic, and that it does not address differences in transmission rates within a country. • We need to establish an evidence base. Do the strategies that have been spoken about really work? How to we evaluate these proposed strategies? Investigations are needed for all aspects

	<p>of malariology.</p> <ul style="list-style-type: none"> • Case study experiences need to be made available in published journals, like Acta Tropica or the Malaria Journal. • We may need to expand the expertise that APMEN can be drawn upon (e.g. those that could do mathematical modeling for prediction purposes, those that work in community involvement). • The importance of community participation for malaria elimination warrants a separate focus group on Day 2 to share experiences and consider how participatory methods might be employed. Participatory Learning and Action (PLA) will be valuable for establishing feedback mechanisms between communities at the village level and policy makers. • APMEN could work on capacity building, possibly through a Fellows Exchange. The next generation of leaders and health workers need to think about elimination. This new focus will reinvigorate the field. • WWARN (WorldWide Antimalarial Resistance Network) could work with WHO to standardize data on antimalarial drug resistance. • Cost benefit analyses are needed. • MEG (Malaria Elimination Group) versus APMEN: MEG provides global intellectual and practical guidance. APMEN’s workstream is specific to the needs of the Asia Pacific Region.
Day 2	
<p>Session 6</p>	<p>Qin Cheng Diagnostics, Surveillance and Monitoring for Elimination [See slide presentation]</p> <p>Comments and Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • RDTs are adequate for malaria control; they can be used for diagnosis of acute illness in the clinic. • For elimination we need more accurate real time diagnostic tools and RDTs don’t provide that accuracy especially for vivax malaria. • The sensitivity of microscopy should not be deflated. RDTs are only sensitive to 50-200 parasites/μl. Bruce-Chwatt’s book notes that a microscopist can only be forgiven for missing parasite densities of <20 parasites/μl. • Role of PCR in mass screening and treatment: PCR is not appropriate in settings where an immediate result is necessary (clinical setting) but it is useful when dealing with asymptomatic cases and a few days turnaround time is acceptable. • PCR in the field is not useful in detection of the liver stage. • Some RDTs do perform very well with vivax. The perception that RDTs are inadequate for vivax may change in the near future (referring to results of recent research). • In Cambodia, MDA is not feasible in areas where there are several hundreds of thousands of people. A mass screening and treatment approach will be used with RDTs allowing for treatment on the spot. They will also use PCR (feedback in 3 days) to help identify ‘hot spots’ in patch transmission areas. • Real world diagnosis and decision making for treatment is less clear. If you have an RDT that is sufficiently sensitive to vivax malaria, but only 90% sensitive to falciparum, the clinician would be reluctant to send a child home without treatment if there is a 10% possibility that the child may die. There would be more tolerance for a lack of sensitivity to vivax malaria as this is unlikely to have severe adverse consequences. • RDTs can be useful, but there needs to be careful consideration about how different diagnostics can be used for different settings. <p>Ravi Goud Malaria Monitoring and Evaluation (M&E): Evolution from Control to Elimination [See slide presentation]</p>

	<p>Comments and Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • For many years there has been much debate, yet still no coalescence regarding indicators for malaria. Too many indicators are proposed and there is a need for a simple framework. Despite all this, there has been progress on the front line at the country level, and programs are moving ahead developing and following measures that they have found practical for M&E. • We have an obligation to provide pragmatic guidance for M&E (we need to measure a small number of things accurately and consistently). • There are some lessons to be learned from the Tuberculosis community, as they have good indicators for M&E. • It was suggested that all that needs to be measured/mapped for elimination are infections. A debate ensued on whether there should be a simple or complex approach to malaria M&E. • M&E should limit the burden of reporting and satisfy the needs of the programs and donors. • APMEN can collect and summarize what indicators countries are currently using, and distil that into pragmatic guide that has an elimination flavour. • MERG relies on surveys. In the Asia Pacific Region, there are better health systems for case reporting. Thus, there is better reliance on the system and less of a need for surveys. • Indicators required by the Global Fund are not relevant for Asia Pacific countries and <i>P.vivax</i>.
<p>Session 7</p>	<p>Archie Clements Mapping Malaria Risk, Applications for Elimination [Slides not available]</p> <p>Presentation Main Points</p> <ul style="list-style-type: none"> • Overview of the Malaria Atlas Project (MAP). • Examples of how maps can be used at a country level were provided, e.g. planning an elimination strategy for Vanuatu, using Bayesian statistics to identify uncertainty and areas where more data is needed. • Maps are not only useful for planning, but they can be used as an operational tool (to track coverage of interventions, like bednets), and for M&E and surveillance (evaluate spatiotemporal clustering, evaluate impact of intervention measures). <p>Comments and Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • Relevance of the global MAP (Malaria Atlas Project) for elimination - Can focus on a particular country and look at sub-national variation of malaria risk and use this to guide intervention decision making. • The global MAP uses a 1 km resolution, but smaller islands will need a higher resolution (perhaps at the household level). • Depending on the setting of the disease, privacy issues may arise with GIS and mapping. There are options to maintain confidentiality. One can aggregate the data represented on the map so that individual households are not identified. • The global MAP is an advocacy tool. • MAP will need to take a different approach to unstable malaria in the Pacific (vs. stable malaria in Africa).
<p>Session 8</p>	<p>Tom Burkot Vector Control in Malaria Elimination: Translating Theory into Practice [Slides not available]</p> <p>Comments and Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • We may be promoting mosquito resistance by allowing old nets to remain in the villages once the insecticide is no longer effective in repelling mosquitoes. • It is unclear if there is an added benefit of including IRS to the elimination program in Tafea Province, Vanuatu, in addition to LLINs (long-lasting insecticide treated bednets). However, given

	<p>that Tanna is a pilot elimination province, this might be the perfect forum for looking into whether IRS contributes significantly to elimination in order to direct future strategy for the rest of the country.</p> <ul style="list-style-type: none"> • Vector surveillance needs to be included in M&E as vectors are not static (this should include incrimination of vectors, seasonality, understanding of breeding site productivity and host seeking behaviours and resistance monitoring). This information will contribute to decision making for elimination programs. • For the forest-related malaria in Cambodia, a systematic distribution of LLINs is crucial. Behavioural assessments of net use are needed. Much research is needed, but it is difficult to carry out due to the mobility of populations. • We don't know what the optimum mix of interventions is for the majority of vector species so we need to keep our minds open to alternate interventions. We need to plan ahead for these alternate interventions. There is a danger that if the programs stall, the populations are at increased risk due to the loss of partial immunity. • The routine function of entomologists during an elimination program: they need to know what the vectors are, when and where are they feeding, and learn more about the larvae. • Different vectors have different capacities with regards to transmission. What mix of interventions is suitable should be considered. More research on vector transmission potential should be carried out. • In a low transmission setting it may not be necessary to implement the standard mantra of "universal coverage of LLINs or IRS" especially for large populations. For example, Jiangsu province of China has 1000 reported cases/year in a population of over 70 million people. They have found it cost-effective to just do vector surveillance and the only vector control measure used is IRS in the setting of outbreaks.
<p>Session 9</p>	<p>Ric Price Eliminating the Parasite: Challenges and Strategies with a Focus on <i>P. vivax</i> [See slide presentation]</p> <p>Comments and Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • Hospitalisation is caused by vivax in the first year of life due to repeated relapses and resultant severe anaemia. Therefore <i>P. vivax</i> is an important contributor to deaths in children under 5 in Southern Papua. <p>Kevin Baird <i>Plasmodium vivax</i>: Hypnozoite & Relapse [See slide presentation]</p> <p>Comments and Responses to Follow-up Questions</p> <ul style="list-style-type: none"> • Recommendation for the radical treatment for <i>P. vivax</i>: there needs to be point of care G6PD deficiency testing, and to ensure radical cure, the regimen should be 30mg/day for 40 days in New Guinea and for 30 days elsewhere. • It may be worth investing in a vivax vaccine, but in the next 5 years, primaquine is all we have and the biggest threat is G6PD deficiency. If we can test for this, than the treatment is safe and effective. We should focus on the tools in our box currently.
<p>Session 10</p>	<p>Michelle Hsiang Priorities for the Network, Breakout Session Guidelines [See slide presentation]</p>

Group 1 Report Back

Top 3 Priorities for APMEN

1. Protocols for treatment of blood and liver stage vivax, including evaluation of different 8-aminoquinoline regimens; sharing protocols; methodologies related to G6PD deficiency testing.
2. Integrated application of new technologies including GIS, mapping, modeling, and diagnostics for finding the last parasite.
3. Evaluate and develop the minimum data requirements for elimination.

Top 3 Activities for APMEN

1. APMEN fellowships to provide mentees and mentors with the opportunity to visit another country, learn about malaria strategies, and access technical assistance.
2. Case studies – Sri Lanka, China, Korea; APMEN to cover costs of the work and publication.
3. Facilitate cross-border collaboration.

Group 2 Report Back

Priorities for the Network

1. Advocacy for the region and for *P. vivax*. Raise awareness and increase funding.
2. Conduct operational research and develop tools for elimination of *P. vivax*.
3. Provide support for capacity building.

Activities

1. Develop and implement an advocacy agenda. APMEN can be the global voice for vivax elimination.
 - a. Advocate to country leaders, to garner ongoing support and financing for elimination in-country, and for cross-border collaboration. Let policy makers know that elimination is feasible and important.
 - b. Advocate to global leaders, to garner support for elimination in the Asia Pacific region (currently under recognized).
 - c. Advocate for funding and research for *P. vivax* (need to emphasize that while prospects may look good for drugs and tools for *P. falciparum*, those for *P. vivax* are lacking – i.e. no good RDT for vivax, fewer drugs in the pipeline).
 - d. Advocate to GSK and the research community for support of tafenoquine.
2. Identify gaps in tools
 - a. Gaps in R&D for *P. vivax*.
 - b. Gaps in knowledge need to be resolved through operational research (evidence for use of ITNs and/or IRS; interventions for vectors that bite outdoors and early in the evening).
 - c. Data collection (common indicators, common data collection methods and reporting) and information sharing
 - d. Tools to measure and track development of resistance among humans and mosquitoes.
 - e. Vector control methods.
3. Capacity development
 - a. Improve capacity of and training for entomologists and microscopists.
 - b. Support countries in the reorientation from control to elimination.
 - c. Perform a training needs assessment.
 - d. Investigate ACTMalaria as a potential training vehicle.

Next step: Establish Task Forces for each of these activities. By November, these task forces should have

identified gaps and developed plans to address them in advance of the November MIM conference in Nairobi.

Group 3 Report Back

The Role of APMEN was discussed at length and it was determined that APMEN is a group of experts with a common interest in malaria elimination. APMEN should meet yearly as a group and identify areas of interest that subgroups can take on and in 3-6 months, generate an output. APMEN should not aim to be the WHO or CDC.

Focus areas

1. APMEN can mobilise the technical expertise.
2. APMEN can provide leadership and advocacy at the international and country levels to support partnerships, cross border collaboration (provide a forum to discuss sensitive issues), and research needs.
3. Elimination of vivax.
4. Training – Fellows exchange, capacity building (especially in entomology), modeling.
5. Exchange and documentation of implementation experiences and best practices.

Group 4 Report Back

Working groups proposed:

1. Case management working group which would take on:
 - Diagnostics
 - Resistance monitoring
 - Primaquine dosing to prevent relapse
 - G6PD deficiency issues
 - Mapping
 - Operational research
 - The advantages would be immediate access to direct populations, the development of common methodologies for new research and data sharing of previous studies.
2. Cross border collaboration group
3. Monitoring and evaluation working group
 - Develop a surveillance package (a tool box) that would provide the strong M&E framework that is required to capture donor funding for elimination
 - Reporting systems
 - Produce operationally feasible and valid indicators
 - Collaborate with other agencies (e.g. MERG, WHO, Measure)
4. Capacity building working group
 - Training component – fellow exchange
 - Collaborate with ACTMalaria
 - Development of an elimination training course (develop curriculum for a 2-3 week course)
 - Consider Elimination Centres of Excellence
5. Community participation working group
 - This group could advocate for the importance of community participation for achieving high coverage (especially in a low morbidity / mortality contexts).
 - Look at social techniques to improve program coverage and to create community feedback mechanisms in member countries.

6. Vector control working group to help guide the countries moving toward elimination.

Priority Areas / Topics

1. Create a template elimination strategic plan
 - Collect and review plans of APMEN member countries
 - Develop a generic strategic plan for those countries wishing to achieve elimination
 - Gather feedback from member countries
2. Capacity building
 - Establish a fellows exchange program
 - Set up study tours
 - ACTMalaria is having their Executive Board meeting this March, an elimination training session could be placed on the agenda
3. Development of website/resource centre/information exchange mechanisms. Could include current and historical material, published and grey literature. Could have both public and member domains. Could have virtual neighbourhood with discussions and link with programs like WWARN and the ACTMalaria Resource Center.

Group 5 Report Back

Five Priority Areas

1. Training for mapping
 - Surveillance and mapping with a regional focus. Better sharing of data, centralized information.
 - Training tailored to elimination.
 - Possibility of management or QA of web based data.
 - Value of mapping in elimination: real time case reporting, e.g. value at present in Korea (cross border).
 - Mapping information sharing (who is recording what, what standards are being used).
 - APMEN can serve as a channel for flow of information, to obtain and sustain commitment from donors/funding sources.
 - In terms of cross border mapping efforts, this will be of value in 3-5 years. It would be better if two countries with a shared border are both in the elimination phase; right now countries are at very different levels and capabilities for mapping.
 - Possibility to initiate training soon with resources from the Network, Archie Clements would like to take this on.
2. Resource mobilisation
 - APMEN can facilitate funding – Needs a Secretariat that can help with writing of proposals to funding bodies such as World Bank, ADB, bilaterals, etc.
3. Advocacy
 - Make it known to funders that the situation in the Asia Pacific is different from Africa, so that they can evaluate regionally focused proposals.
 - Political advocacy- locally, globally
 - Engage political commitment to elimination
 - Advocate to health ministers/heads of state/national leaders
 - Let APMEN identify and promote the differences between and within regions
 - Create an advocacy document that has strategic and communications components (can be a function of Secretariat)

	<ul style="list-style-type: none"> - Avoid competing for funds <p>4. Technical assistance</p> <ul style="list-style-type: none"> - Provide technical assistance on elimination for countries, especially to local level - Provide support on program reorientation – e.g. when do you reorient survey data? HIS? At what level of transmission? - Training and sharing experiences related to elimination - Vector control - Mapping - Entomology - What activities can be dropped, what should remain, and what point can an activity cease? - What is required post-elimination? - Development of indicators and how to implement them in member countries - Creation of guidelines, identification of best practices, monitoring, site visits <p>5. Network to encourage information sharing</p> <ul style="list-style-type: none"> - Collation of literature that is not published e.g. numerous clinical trials, studies which are in Chinese and not translated into English. Linhua Tang expressed a willingness to share the Chinese literature. - APMEN can link with other resource centres like ACT Malaria - Document country experiences
<p>Session 12</p>	<p>Jim Tulloch Priorities for the Network [See slide presentation]</p> <p>Open Forum Discussion</p> <p>1. Advocacy / leadership, facilitation, information sharing, technical assistance</p> <ul style="list-style-type: none"> • Elevate cross border advocacy and garner support from funders for cross border initiatives. • Ensure not all resources are given to one or a few countries and that the Asia Pacific countries are kept in the forefront of the agenda. • If we emphasize vivax too much we may isolate the Asia Pacific from Africa. It is better to emphasize our common goals with Africa. We can learn from each other and cooperate on this global effort. We don't want to get into an Africa vs. Asia Pacific advocacy battle. • Need to strengthen the profile of the region, especially at international conferences. At the upcoming MIM conference, the Asia Pacific region will likely be severely under-represented. • We should draw on ASEAN examples of cross border cooperation in the management of HIV. We can learn from these experiences. • APMEN needs to advocate to Ministers, we could line up one of the APMEN meeting with the ASEAN meeting • It will be important to get some easy cross border collaboration wins prior to embarking on the more complex negotiations. • ACT Malaria Resource Centre could work with APMEN to set up an elimination resource centre. Cecil is happy to work with APMEN on this issue. One problem though is that the literature is not always accessible because it is not translated into English (e.g. Chinese literature). • The Resource Centre could match study opportunities with candidates. • To avoid duplication, coordination with existing networks is necessary. • Tony Kalm offered to lead the advocacy effort for tafenoquine development. • WHO is already doing a lot of work in terms of GFATM proposal support and technical assistance, so it will be important to align in these areas.

2. Capacity development

- APMEN could facilitate more formal PhD and Masters level training rather than just short term exchanges. If APMEN does not have funding for these programs, APMEN can inform existing programs/scholarships and help steer training toward issues of malaria elimination.
- Look at existing capacity building / fellowship programs and liaise with these.
- Identify what the capacity gaps are and prioritize them.
- Organize study tours.
- Provide online training. APMEN could provide certification for training in certain areas.
- Ongoing discussions on workforce development are required.
- Who will fund these programs? - APMEN could be advocate strongly for these training and fellowship programs, but may only directly fund shorter term exchanges.
- Building up 'centres of excellence' is an expensive process. It may be more appropriate for APMEN to help identify these 'centres of excellence.'

3. M&E, surveillance

- Refine the indicators for stages of elimination. This should be done in coordination with WHO.
- Selection of a subset of variables from the tool box for specific contexts may be the best approach rather than using standardised indicators for all countries.
- Integration of malaria information into health information systems – how do we do this and is there a role for disease specific reporting systems especially for elimination?
- WHO, Knowledge Hub (part of PacMI, Brisbane), and some country representatives could take on these tasks.
- Huge advantages for APMEN in focusing on M&E specifically for elimination and only for our region (minimal data set). Next step would be to take that minimal data set for M&E back to the Global Fund as currently they are focussing on a standard set of global indicators that are not necessarily appropriate in the Asia Pacific region.
- 'Virtual Neighbourhood' nice idea but may be more appropriate as a website that members can visit when desired rather than a regular communication tool.
- Mapping should be more focused on the mapping format that is occurring for Tanna than of the larger scale of the Malaria Atlas Project.
- Archie Clements and others at the University of Queensland are looking at mapping / modeling for vivax in the region.
- Michelle Gatton of AMI is working on some modeling for *P. falciparum*, *P. vivax*, and mixed infections, to determine what interventions are needed for different transmission settings.
- Modeling of resistance is occurring at WHO with Gates funding.
- There will be a MalERA meeting on modeling next week, issues pertaining to the Asia Pacific should be on that agenda.

4. *P. vivax* diagnosis and treatment

- Menzies is interested in leading the work for this focus group, along with Ivo Mueller, Kevin Baird, George Taleo, and Dennis Shanks.
- APMEN's "value added" could be to prioritise the research needs and provide the link to country programs
- Despite WHO's efforts, many feel there is still not enough data on resistance of vivax to chloroquine and primaquine. APMEN can collaborate with WHO and WWARN in resistance monitoring.

5. Vector control

- WHO is doing much work in integrated vector management and providing guidance on optimal use of resources and capacity building.
- Training and operational research on vector control are priorities for this group.
- Evaluation of new strategies and cost effectiveness analyses of interventions are needed.

	<ul style="list-style-type: none"> • Entomologists in the room to take the vector control work forward. Tom, Jeffrey, and Ravi expressed interest. • Malaysia has 68 entomologists in their program, but half are not trained well. • Insecticide resistance monitoring will be important. Need to monitor the efficacy of insecticides in LLINs – advocacy and sharing of information. Not many countries are doing insecticide monitoring, and it needs to be put on the agenda. <p>6. Community participation</p> <ul style="list-style-type: none"> • Community participation is extremely important especially for maintaining high coverage in low transmission settings • Lack of community participation was a reason for failure of the previous eradication campaign. • This group could advocate for the importance of community participation for achieving high coverage. • Look at social techniques to improve program coverage and to create community feedback mechanisms in member countries. • University of Queensland could take the lead on this, there is a vast literature on social techniques for effective engagement. It would be worthwhile to explore experiences and successes from other programs: filariasis, polio, onchocerciasis. George Taleo is also interested in this area. <p>7. Private sector</p> <ul style="list-style-type: none"> • Economic assessments are necessary: costing, cost effectiveness analyses, and cost benefit analyses of elimination. • The issue of drug quality control is something APMEN could potentially take on. • Need to engage this sector in malaria elimination. • Information sharing on this issue would be valuable.
<p>Session 13</p>	<p>Richard Feachem APMEN Structure and Next Steps</p> <p>Initial Comment in Response to Prior Discussion</p> <p>Global Fund and cross border programs – there are two ways this can occur:</p> <ol style="list-style-type: none"> 1. A country can make an application in the standard way (and emphasis border activities), e.g. China’s Round 6 proposal for strengthened control at Yunnan/Myanmar border. 2. To make a multi-country application (focusing on the border region). Challenges for this approach include: <ul style="list-style-type: none"> - Eligibility issues - Multi country CCMs - There needs to be an effective principal recipient (PR) - The Global Fund will ask what is the value added in this approach compared to a single country application. It was recommend that this requirement be removed, and for the focus to be on identifying a principal recipient. <p>Discussion points following presentation on APMEN Structure and Next Steps:</p> <p>Size and Scope</p> <ul style="list-style-type: none"> • What defines an APMEN member countries? - Two criteria: Countries in the Asia Pacific with an elimination goal for their entire country, and countries that are committed to significant elimination in the short term for larger areas. Although APMEN does not want to be exclusive, there is a danger that the Network becomes so big that it is no longer useful. • Consider two levels of country membership, with a secondary level of countries that are

invited to attend on an observer basis but are not full members e.g. those border countries of elimination countries attend the meeting to sow the seed for future elimination.

- Suggestions that APMEN extend invitations to:
 - Thailand and Vietnam & 3 states of India could be future members
 - Rotary Against Malaria and SPC (Secretariat of Pacific Community) two sub-recipients of the Global Fund initiatives in the Pacific
 - Inclusion of the private sector – those that are for-profit and not-for-profit. There may be limitations for WHO's involvement with APMEN if there is private sector involvement
 - Inclusion of those countries that have eliminated malaria, have them share their experiences and provide feedback
 - Consider as observers, those who have been involved in other eradication campaigns: trachoma, onchocerciasis, lymphatic filariasis
 - Strengthen social science and economic expertise at the meeting
 - Consider attendance of mosquito associations
 - Consider SEAMEO TropMed
 - Attendance of community workers at APMEN meetings would not be practical
 - Involvement from private industries, such as tourism, mining, smelting
- All participants should email Michelle Hsiang following the meeting with specific suggestions for future inclusion at APMEN meetings.

Structure

- Frequency of APMEN meeting – Annual meeting agreed upon as practical and feasible
- Focus Groups / Task Forces – reporting back to APMEN at annual meeting. Flexibility around when and where these task forces meet
- Leadership for each Task Force should come from APMEN members
- Location of meeting – to rotate around APMEN member countries and this could include site visits
- Sri Lanka offered to host 2nd meeting of APMEN in 12 months time, APMEN participants gladly accepted the request

Support structure

- Secretariat will be some combination between San Francisco and Australia (Australian institution yet to be determined). For the particular work streams there would be a leadership and coordination point at a member institution.
- One of the first tasks of the Secretariat would be to turn discussions of this meeting into a business plan to bring in other potential donors.

Linking with Other Initiatives

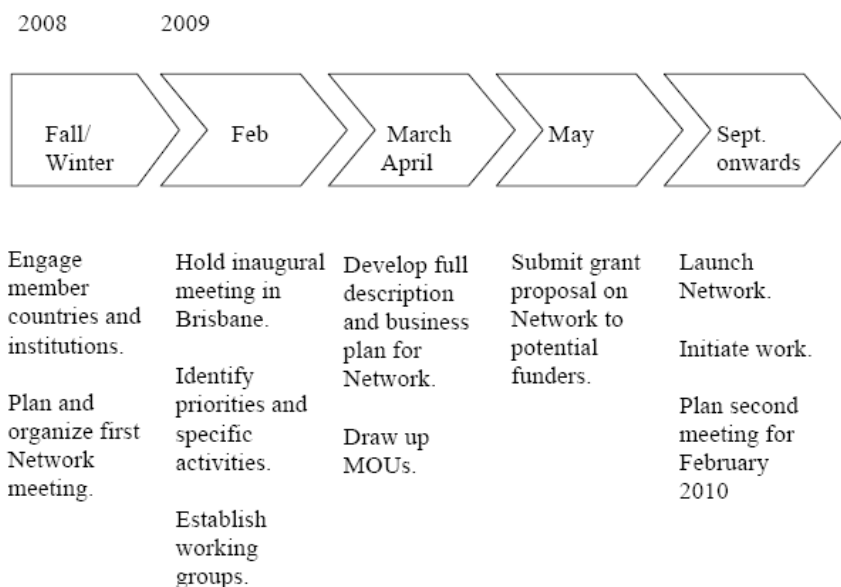
- Collaborative work with other core partners (WHO, Panama vivax meeting, ACT Malaria, MAP, PacMISC, Roll Back Malaria, WWARN, Mekong malaria program, APEC, ASEAN, Malaria Elimination Group (MEG), MalERA (Malaria Eradication Research Agenda, SEAMEO TropMed, etc.)
- APEC has HIV and avian flu on their agenda. Malaria should also be included on that agenda.
- Call for a short presentation at the Panama vivax meeting in May 2009. Qin Cheng and Ivo Mueller are on the organising committees for this meeting, can help facilitate for an APMEN session there.
- Invitations and emails to Michelle Hsiang with other suggestions on potential APMEN collaborators.

Funding

- The APMEN business plan will immediately be presented to AusAID and the Gates Foundation who have indicated a receptivity to the ideas of APMEN. Other potential funders: USAID, JICA, South Korea, Malaysia, China, ADB.

- Important to stress that this is not about large amounts of money. Contributions are a political statement in support of regional cooperation on malaria elimination – i.e. a modest contribution from Malaysia would be welcome.
- Volunteers are welcome to help with preparation of the proposal – the Secretariat team will prepare most of the proposal, but members may be approached for input i.e. 3 pages on primaquine.
- ADB has reorganized their way of funding, and interest has moved away from vertical health initiatives. However malaria should be seen as a regional public good. Individual countries cannot pursue this on their own, and externalities are also important to recognize. Country A eliminates, benefits Country B.
- Vivax in Asia has not been costed very well. This needs to be developed further and is extremely important especially to our region. Economic arguments are a priority for making the case to donors.
- The Malaria Elimination Group (MEG), a global advisory group on malaria elimination convened by the Global Health Group, identifies 3 big gaps:
 - Cost of elimination, pre/post
 - Cost effectiveness in the context of elimination
 - Cost benefit, looking at the costs of elimination and weighing against social and economic benefits of having no malaria in your country. This should be central to the case studies of APMEN.
- Potential for funders – the oil industries have a responsibility to provide funding to organisations such as Global Fund – Chevron has already done this. Major companies such as Exxon Mobil have taken an interest in malaria. Most interested companies will be ones that have activities in this region. The mineral extraction industries are extremely active in this region and are conscious of their responsibilities.
- PNG is a leading example of turning mining profits into health care.

Draft Timeline



	<ul style="list-style-type: none"> • In this next year, major work will involve: development of the business plan, securing of funding for APMEN, initiation of the work plan, and planning for the 2nd meeting of APMEN. • If people are aware of blackout dates – please notify the Secretariat. • Significant APMEN activity is not going to happen until we have the business plan and funding. Lesser activity is possibly to start now. Please give input as to how these processes should be developed. We don't want to meet for a 2nd time without anything to show. • A full case study on Sri Lanka was requested before the 2nd meeting. • Initiatives can be started tomorrow – larger and more complex initiatives need to be under the business plan, however we should be able to do things in the meantime. • Focus groups need to be formed to identify our needs and priorities. <p>Final Comments and Suggestions</p> <ul style="list-style-type: none"> • Suggest that all member countries put up their own strategy plan so that they can have a costing of the needs they have. Before next year we should have a collection of strategic plans from all member countries about their needs for elimination. Cost analysis on elimination. • 5 or 6 countries have already made an elimination Global Fund submission. This has required significant development and already exists for Sri Lanka, Swaziland, Vanuatu, Solomon Islands. • Through the UCSF Global Health Group, a cost analysis of elimination in China has been performed, and two other analyses are in the process of being conducted: Philippines and Mauritius. • The Burnett Institute was offered as a possible APMEN host for research and information sharing. • MDG's need to be updated to account for elimination, APMEN can help to align MDG goals with goals for elimination. • Countries that achieve Elimination will require technical expertise and advice on how to register and prepare for WHO certification. • Suggestion – APMEN could very readily invite “alumni” to the 2nd meeting, a knowledgeable person in the region who has experience with elimination and the certification process. • On the issue of certification of elimination, the WHO certification guidelines will requires some re-analysis. APMEN could work with WHO to update those criteria and help review the specific criteria for elimination and certification.
<p>Session 14</p>	<p>Concluding comments from John Ehrenberg (WHO), Jim Tulloch (AusAID), and Richard Feachem (GHG)</p> <p>John Ehrenberg</p> <ul style="list-style-type: none"> • Thank you to the Australian government and AusAID for their support of this meeting. • The South-East Asia and Western Pacific regions welcome the discussion of elimination as an extension of WHO's role in malaria control and elimination. • Acknowledged the strong support of the Network by UQ and AusAID, who are some of the most trusted and long term partners in the region. • Thank you to all participants who provided a presentation on the current state of malaria and challenges in the region • Look forward to further discussions. • APMEN will provide members with effective mechanisms for elimination discussion and advocacy. • The regional offices appreciate Prime Minister Kevin Rudd's suggestion of APMEN and the effort that went into the event. • Kevin Rudd's commitment to malaria and the region is a tremendous boost to all programs. • WHO Head offices will receive detailed reports on the meeting and these will be considered in due course.

Jim Tulloch

- Thank you to all participants and especially members of AusAID who have contributed to the success of the meeting.
- Thank you to Kevin Rudd for suggesting the meeting. It has been productive, and more important networks have been formed which may lead to collaboration in the future.
- Thank you to all who have put the meeting together at such short notice.
- Mr. McMullan's comments at the opening of this meeting encouraged us to continue with this initiative.
- Pleased we have an agenda to go forward, however the plan is optimistic/ambitious and we should be realistic as to our expectations of the Network. A five year agenda should be developed; short term success will be good for APMEN.
- Pleased there were a good round of volunteers for the various initiatives this morning.
- Particularly from an AusAID perspective, eliminating countries are encouraged to actively participate as this network is here to support you.
- Thank you to the organisers and thank you to the institutions and the individuals who have participated.

Richard Feachem

- Thank you to WHO, WPRO and SEARO for their assistance and participation, to the Australian Government, Kevin Rudd, and Bob McMullan, Jim Tulloch, and Anh-Thu, colleagues from UQ. Thank you to Marjorie Castro and Sally Brown our event planners.
- This meeting has generated substantial press coverage. Many of the newspapers have covered the meeting and there has been significant uptake on radio stations and television stations. We will collect that coverage for members to have.
- Requested participants connect these releases with the media back in their countries.
- Richard Feachem will report on the outcome of the meeting to Bob McMullan.
- The teams in San Francisco and Brisbane will rapidly move forward with the business plan and ensure that the emerging work of APMEN is connected with other regional groupings. APMEN is not alone as a regional grouping. Through the work of WHO, the Tashkent Group includes eliminating countries from Turkey to Tajikistan. In early March, a new elimination group called the E8 will be formed, including Botswana, Swaziland and South Africa, Namibia, Angola, Mozambique, Zimbabwe, and Zambia.
- The Global Health Group will make sure that the work of APMEN is shared with the Malaria Elimination Group (MEG) at its next meeting in mid April.
- Thank you to everyone for coming and participating.