Outdoor Malaria Transmission Work Stream Progresses

Prof Marc Coosemans & Dr Chusak Prasittusuk
6th Meeting VCWG  (February 2011)

From “Forest malaria” to “Outdoor malaria transmission”

1st phase:
- to focus on the Mekong Region facing artemisin resistance.
- high proportion of early biters and exophilic vectors
- need to supplement large scale use of ITNs (LLINs)
- additional personal protections tools:
  - topical & spatial repellents,
  - treated blankets, clothes, sheets
  - treated hammocks/hammock nets
  - insecticide plastic sheeting/tents
- evidence based research: entomological, epidemiological and social
- but keeping in mind that the relative proportion of outdoor transmission increased almost everywhere with scaling up of vector control (ITNs/IRS)
Agreement of August 2011 with Mahidol University: (budget 15,000 USD)

Mekong countries: Cambodia, Myanmar, PR China (Yunnan province) PR Laos, Vietnam, Thailand.

Objectives:
1. To establish the institutional networks: identify the researchers as the technical support on outdoor transmission
2. To review research and other related activities to control outdoor transmission in these countries
3. Discuss the strategic direction for research and development along the lines of entomological and epidemiological efficacy and community acceptability
4. Establish and ongoing network of communications and mutual technical support and information exchange

Deliverables
1. Inventory of institutions and researchers (AFRIMs Bangkok)
2. Compilation of regional research (AFRIMs Bangkok)
3. Strategy document - workshop (Mahidol University, TropMed)
Progresses

- A two day meeting was planned from 23-30 November 2011 but has been postponed to 12-13 March 2012 (flooding in Bangkok)

- One day meeting (28 November 2011) in Phnom Penh assembling 25 actors (national, international) active in Cambodia.
Meeting in Phnom Penh (28 November 2011)

- Knowledge on outdoor transmission and potential control tools to address residual transmission (= not covered by ITN or IRS).

- Review on ongoing research
  - Measurements of outdoor transmission (ITMA/CNM)
  - Vector distribution and biodiversity (CNM, NIH, NAMRU2)
  - Operational research in vector control (MC)
  - Baseline studies on vector behavior and testing of interventions (personal protection) (LSTM - TRAC)
  - Topical repellent as added control measure to LLINs (randomized cluster based trial) (B&M Gates Foundation) (CNM, IPC, ITMA)
  - Feasibility of the feasibility, acceptability and field efficacy of personal protection among specific at risk groups (PFD, LSHTM)
  - Malaria knowledge and preventive practices among mobile and migrant population (CNM)
  - Evening activities in ethnic minority groups (CNM, IMTA)

- Institutions involved in outdoor transmission in Cambodia
  - CNM: National Center for Malaria Control
  - ITMA: Institute of Tropical Medicine of Antwerp
  - NAMRU: US Naval Medical Research Unit No. 2
  - NIH: National Institutes of Health
  - LSTM: Liverpool School of Tropical Medicine
  - LSHTM: London School of Hygiene & Tropical Medicine
  - IPC: Institut Pasteur du Cambodge
  - MC: Malaria Consortium
  - TRAC: Tracking Resistance to Artemisinins Collaboration
Plans for 2012

- Workshop on 12-13 March 2012 organized by the Faculty of Tropical Medicine, Bangkok. => Mekong countries

- Inventory of institutions and researchers in the Mekong region (AFRIMS Bangkok).

- Compilation of regional research (AFRIMS Bangkok)

- Review of residual transmission in the Mekong Region and elsewhere (ITMA).

- Strategies for research and development
## Agenda Wednesday 8th February 2012

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00-13:10</td>
<td>Overview of expectations and current activities</td>
</tr>
<tr>
<td>13:10-13:20</td>
<td>Review of the current situation and magnitude of outdoor transmission of malaria and potential control tools</td>
</tr>
<tr>
<td>13:20-13:30</td>
<td>Discussion</td>
</tr>
<tr>
<td>13:30-14:00</td>
<td>Approaches to raise the proof of principle, research evidence based control interventions to tackle outdoor transmission (methodological)</td>
</tr>
<tr>
<td>14:00-14:30</td>
<td>Discussion</td>
</tr>
<tr>
<td>14:30-14:45</td>
<td>Needs for achieving adherence and sustainability of interventions based on individual protection</td>
</tr>
<tr>
<td>14:45-15:00</td>
<td>Discussion</td>
</tr>
</tbody>
</table>