RBM VECTOR CONTROL WORKING GROUP (VCWG)

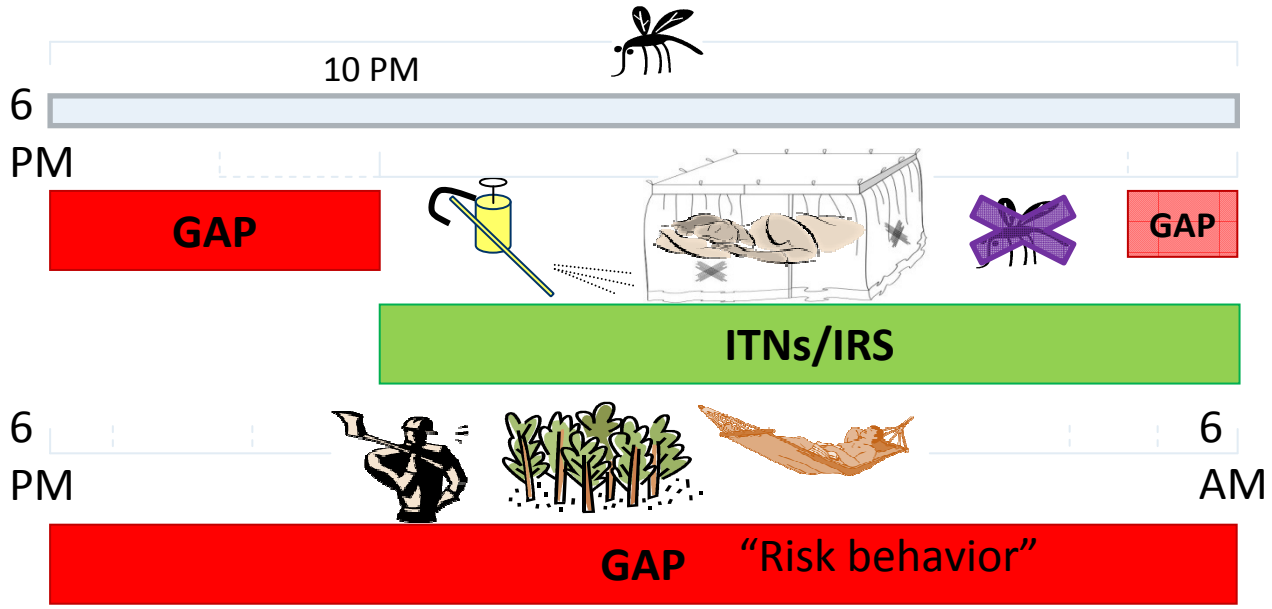
Outdoor Malaria Transmission Work Stream

update 2012 and plans

Prof Marc Coosemans & Dr Chusak Prasittusuk

Geneva, VCWG, Outdoor malaria transmission, 28-30 January 2013

1. Importance of “outdoor” transmission.



Scaling up ITNs and IRS have contributed significantly to a worldwide decrease of malaria, but:

- IRS has little impact on **outdoor resting vectors**
- ITNs do not affect **outdoor and/or early biting vectors**

Residual transmission > Outdoor transmission

2. Progress of the Work stream on "Outdoor transmission" 2012

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

Activities in 2012:

- **4th Work Stream Meeting on Outdoor malaria transmission in the Mekong Countries. (Roll Back Malaria) Bangkok 12- 13 March 2012.**
- **Scientific Review on Outdoor transmission**
- **Development of Guidelines on Spatial repellents (WHOPES)**
- ***Research project in Cambodia :* MalaResT on topical repellents**

4th Work Stream Meeting on Outdoor malaria transmission in the Mekong Countries. (Roll Back Malaria)

Bangkok 12- 13 March 2012.

Around 40 participants from 5 Mekong countries (Cambodia, Myanmar, PR Laos, Thailand and Vietnam), experts from WHO, research institutes, partners and industries.

- **Review of the malaria situation in the different countries of Mekong region.**
- **Current control practices against Outdoor malaria transmission/ special groups**
- **Panel discussion on strategic direction for control outdoor transmission**
  - 1. Comprehensive literature reviews on ODT (scientific papers & Unpublished reports)
  - 2. Identification of control measures (existing/new) requiring evaluation
  - 3. Study designs / evidence based research

4th Work Stream Meeting on Outdoor malaria transmission in the Mekong Countries. (Roll Back Malaria)

Bangkok 12- 13 March 2012.

RECOMMENDATIONS

1. The group has agreed to setting up an **Outdoor Transmission Network** with Secretariat (to be identified); TORs (drafted) to be finalized and key products of this Outdoor/Residual Transmission Network identified;
2. Focal points for Outdoor/Residual Transmission for each country should be identified;
3. Network should foster exchange of information amongst all stakeholders to develop new tools and evaluation;
4. There is a need to have new tools addressing outdoor transmission prioritizing the general population and for special risk groups (to be defined operationally);

4th Work Stream Meeting on Outdoor malaria transmission in the Mekong Countries. (Roll Back Malaria)

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RECOMMENDATIONS

5. There is a need for well-designed epidemiological evaluations of new concepts for outdoor transmission malaria control/elimination (personal protection and push-pull).
6. New tools do not (necessary) require epidemiological end-points, rather entomological efficacy against mosquito bites and compliance/adherence parameters should be adequate.
7. Inventory of institutions and researchers should be more comprehensive, finalized, and made available (feedback from countries needed);
8. Database of previous and on-going research carried out in Mekong countries should be developed and made available;
9. Advocate and mobilize resources

4th Work Stream Meeting on Outdoor malaria transmission in the Mekong Countries. (Roll Back Malaria)

Bangkok 12- 13 March 2012. (35 participants)

Initial draft of ToRs of the Network

1. Stimulate and guide common research that will respond to questions related to countries problem on outdoor transmission;
2. Support the development of standardized operations research protocols for entomology, social science and epidemiology as relevant or applied to vector control;
3. Coordinate technical support and sharing of information /research results and evaluating those results to translate them to policy and action on a region wide basis;
4. Strengthen and sustain existing research capability of the countries (programs and institutions within the countries);
5. Advocate and mobilize resources by identifying existing and potential resources for the network

2012: Scientific Review on Outdoor transmission

Comprehensive review on residual transmission and shifts observed in the presence of indoor insecticidal pressure (IRS/ITN)

- Shifts in vector species,
- Shifts early-evening/morning biting
- Shift to exophagy
- Shifts to zoophily
- Shift to exophiliy

In the Afro-tropical, Australian, Oriental and Neotropical Regions (126 references)

Reference:

Durnez L. & Coosemans M. (2013)

Residual transmission of malaria: an old issue for new approaches.

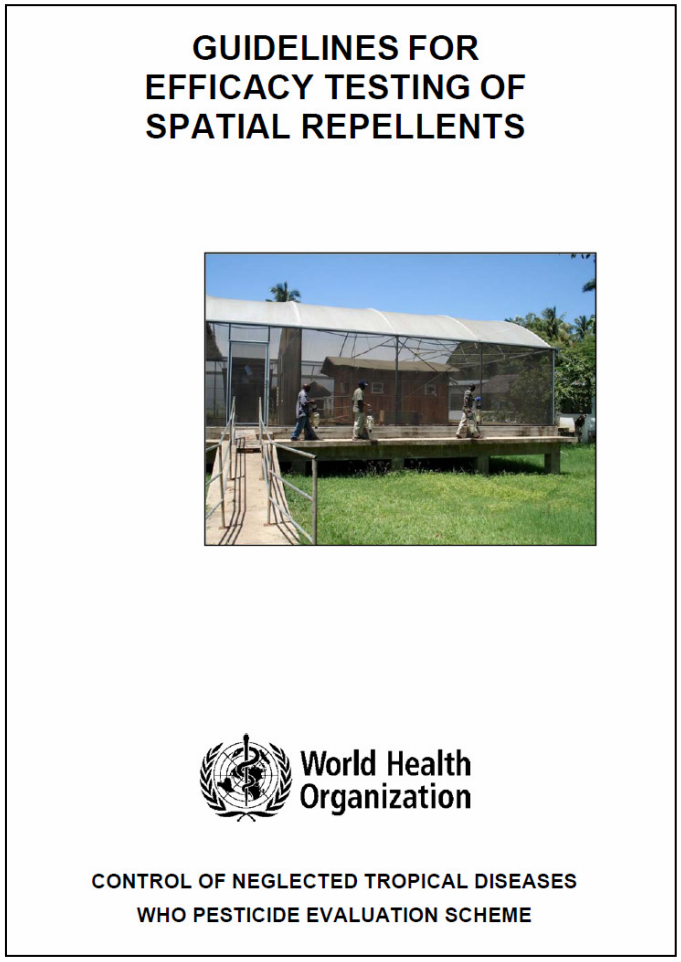
In "Anopheles mosquitoes – New insights into malaria vectors"

Editor Sylvie Manguin; Publisher Intech (open access)

http://www.intechopen.com/books

(publication foreseen in March 2013)

2012: Development of guidelines on spatial repellents



To be published in 2013 by WHOPES

2012: *Research project:* MalaResT

Topical Repellents as added control measure in Cambodia

(2012-2014; Partners: ITMA, CNM, IPC, SCJ funded by BMGF)

CONCEPT: Repellents as additional protective tool

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ANTHROPOLOGY

Acceptability, adherence and adequacy of LLINs and repellents

ENTOMOLOGY

1. Mass effect of mass repellent use on malaria transmission
2. Individual protective efficacy of the used repellent

EPIDEMIOLOGY

1. Impact of additional use of repellent on the prevalence of malaria carriers and malaria incidence
2. Other parameters including impact on arboviroses

3. Plans for 2013

Meeting in March 2013

- To finalize the ToR of the Mekong OMT Network
- To agree on workplan 2013/2014
- To identify country focal points and office of Secretariat of the MOMTN
- To agree on modalities, roles, functions and working system

Participants:

- participants/ country (PR China, Cambodia, Myanmar, Lao PDR, Thailand, Vietnam)
- WHO/SEARO, WHO/WPRO & WHO/HQ
- RBM, partners

Organization: SEAMEO-TROPMED -

5th Outdoor Malaria Transmission Work Stream Meeting
Wednesday 30th January 2013
IFRC-Auditorium
13:00-15:00
Co-leaders: Marc Coosemans & Chusak Prasittusuk

Agenda		
12:00 – 13:00	Lunch **Poster viewing**	
13:00 – 13:05	Objectives and introductory remarks	
13:05 - 13:20	Outdoor and early transmission – an old issue for new approaches	Marc Coosemans
13:20 – 13:35	Outdoor malaria transmission in Africa	Gerry Killeen
13:35 – 13:50	Discussion	
13:50 – 14:05	Topical and spatial repellents: where are we?	Sarah Moore
14:05 – 14:20	Personal protection tools from the deployed warfighter research program	Scott W Gordon
14:20 – 14:40	Discussion	
14:40 – 14:50	Mekong Outdoor Malaria Transmission Network	Chusac Prasittisuk
14:50 – 15:00	2013 Workplan: Discussion	
15:00 – 15:30	Afternoon break / coffee and tea **Poster viewing**	

Name