Summary Report of the

Workshop on Development of Strategy to Contain Artemisinin Resistant Malaria among Migrants and Mobile Populations

In the context of

"A Strategy to Contain Artemisinin Resistant Malaria Parasites in Southeast Asia"

Century Park Hotel
Bangkok, Thailand

8 – 10 June 2009

Background and Introduction

There is evidence for the emergence of artemisinin resistance along the Cambodia-Thailand border area. In recognition of this worrying situation as a global emergency, the World Health Organization (WHO) has begun to take steps to confirm and characterize artemisinin resistance, to define optimal strategies and support the preparation of plans of action in Cambodia and Thailand, and to contain the spread of artemisinin tolerant parasites. This initiative is funded by the Bill and Melinda Gates Foundation (BMGF) and initially runs for a period of two years, 2009 – 2010.

It is acknowledged that containment of resistance will require a joint, harmonized cross-border strategy, particularly with regards to migrant and mobile populations who are one of the target populations in the containment strategy. As the containment of artemisinin resistance is a regional and global public health concern, it will be beneficial to share experiences and lessons learned from various governmental and non-governmental organizations, local authorities, and other countries. The Malaria Consortium (MC), one of the partners in this WHO-led strategy to contain artemisinin resistant parasites along the Thai-Cambodian border, in collaboration with WHO will organize a series of technical meetings in 2009 to support the monitoring and evaluation of the Project.

This joint workshop between Thailand and Cambodia is a follow-up to the Informal Consultation of experts for the "Development of a Strategy Towards Elimination of *Plasmodium falciparum* Parasites with Altered Response to Artemisinins" held in Bangkok, Thailand 13 – 14 February 2008.

As a critical component of the strategy to contain artemisinin resistant parasites, migrants and mobile populations/cross-border issues were discussed in round-table working groups.

Key points from the informal consultation included:

- Definition and magnitude of migratory patterns is still a big question. Mobile populations move from one place to another, either temporarily, seasonally, or permanently, for either voluntary or involuntary reasons. "Migrant" is a more specific term used for those mobile people who take up residence or remain in another location for an extended period of time, including seasonal migration. Internal migrants move from their homes to other places within the same country. External migrants are people who cross international borders and live in another country.
- Knowledge is spare regarding the number of migrants, where they came from and where they are going, both within and between countries.
- There is a need for increased boundary border surveillance and active investigation.
- Regulations and policy in Cambodia and Thailand for migrants are different and continuously evolving, e.g., pertaining to free access or not to health care services.
- Cambodia should focus on internal migration while Thailand should focus on cross-border investigations, but activities need to be linked to ensure both internal and cross-border migration is addressed.

- Establish and harmonize cross-border activities with a multisectoral approach with involvement of ministries from health, interior, defense, foreign affairs and labor.

The overall objective of this workshop is to develop a strategy to contain artemisinin resistant malaria among mobile and migrant populations in 7 border provinces in Thailand 10 border provinces in Cambodia.

Specific objectives

- To share information about mobile and migrant populations (i.e., defining who is a migrant, patterns of migration, identifying NGOs and community organizations working with migrants)
- To get an update on situational analysis of mobile and migrant populations in Thailand and Cambodia
- To share novel and creative approaches for the delivery of prevention, diagnosis and treatment of health and malaria interventions for mobile and migrant populations
- To formulate a working strategic framework to access mobile and migrant populations for the containment of artemisinin resistance

The agenda and list of participants are included as annexes 1 and 2, respectively.

The full presentations were distributed to participants and are available on CD ROM by request.

Introduction to the meeting and participants.
Dr David Sintasath, Regional Epidemiologist, Malaria Consortium

This is the second of four meetings to be organized by the Malaria Consortium. The main aim of the workshop is to develop a strategy to access mobile and migrant populations and deliver effective prevention and treatment of malaria to stop the spread of resistant parasites outside the area of the containment project. To this end, it is anticipated that a basis for a clear plan of action will be developed from this workshop.

A strategy to contain the spread of artemisinin resistant malaria parasites among migrant and mobile populations is critical to the Containment Strategy, as these populations are the most difficult to access and are more at risk for spreading the resistant parasites.

Containment Project Overview
Dr Najibullah Habib, Containment Project Manager, WHO

Main points

Dr Habib stressed the urgent need to prevent the spread of artemisinin resistant parasites as it has world-wide implications. All the objectives of the Containment Project are pertinent to mobile and migrant populations. We need to:

- Detect and eliminate resistant parasites and clear gametocytes to prevent transmission
- Reduce drug pressure by stopping the sale of monotherapies and substandard drugs and increasing patient compliance to drug regimes
- Prevent transmission by distributing preventive methods especially LLIN
- ***Prevent transmission of the parasite by migrant and mobile populations***
- Support containment/ elimination by advocacy and IEC/BCC and community mobilization
- Plan for operations research to fill the knowledge gaps and to develop novel, evidence-based strategies
- Provide effective management and coordination

All this will require high quality implementation over the next two years with money initially from BMGF and extending to 2015 through potential support from the Global Fund to Fight HIV/AIDS, TB, and Malaria (GFATM) Round 9 proposals.

The Containment Project is taking place in Zone 1 (8 administrative districts (ADs) in five operational districts (ODs) in four provinces in Cambodia and 3 districts in two provinces in Thailand) where there is evidence already of artemisinin resistant *Plasmodium falciparum* and Zone 2 (7 provinces in Thailand and 10 provinces in Cambodia) where there is no evidence yet, but the risk is high due to their proximity to Zone 1.

The project is a collaborative effort of agencies with the range of key skills and capacity to mount the necessary response led by the WHO at global, inter-regional, regional, and country level. Managed by both WHO SEARO (Thailand) and WPRO (Cambodia), the project management team is based in Cambodia but with strong liaison with the Bureau of Vector Borne Disease (BVBD) in Thailand and Center for Malariology, Parasitology, and Entomology (CNM) in Cambodia. The project has several partners including the Malaria Consortium for overall monitoring and evaluation (M&E) and technical input, Institute Pasteur Cambodia (IPC), Mahidol-Oxford Research Unit (MORU), and the Center of Excellence for Biomedical and Public Health Informatics (BIOPHICS). Furthermore, there are two national (Thailand and Cambodia) and one international task force committees to provide technical advice and oversight for the project.

Mobile and migrant populations are considered important factors in the potential spread of artemisinin resistant parasites within countries and across borders. We urgently need to develop concrete proposals to address these specific issues. Objective 4 of the Containment Project specifically deals with containing the spread of artemisinin resistant parasites among migrants and mobile populations. The indicators associated with Objective 4 include many of the aspects which will be explored in this workshop including the situation analysis, how to distribute LLINs and LLHNs, points of access of the populations to diagnosis and treatment when they become sick with malaria and how to deliver appropriate and effective IEC/BCC to these populations. There is also a need to collect the names of organizations involved in providing services to migrant and mobile populations (e.g., local and community organizations, including civil society and NGOs as well government organizations). Dr Najib also mentioned about the recent micro-planning meeting in Battambang which explored the issues of how to get LLINs/LHINs to this population.

Opening remarks
Dr Chea Nguon, Vice Director, CNM Cambodia

Dr Chea Nguon welcomed the participants on behalf of the CNM Director, Dr Duong Socheat. He pointed out that health in the context of migration has become an important issue in view of the ever increasing mobility of the population both for reasons of work, trade and tourism. Malaria has received much less media attention than other hot topic diseases such as SARS and Swine Flu (H1N1) but it is indeed important to remember that malaria has plagued civilizations for thousands of years.

People move in diverse ways and this contributes to the transmission of malaria. Previously resistance to antimalarials such as chloroquine, sulphadoxine-pyrimethamine (SP), and later mefloquine arose in the Thai-Cambodian borders and has spread from Southeast Asia to Africa and the rest of the world. If artemisinin resistance spreads in a similar fashion it would not only set back the successes made so far against malaria but also be a global public health catastrophe.

Movements of populations within the forest fringe areas have been a key focus for interventions for CNM over the last few years as well as looking at the seasonal migration of

laborers for planting and harvesting activities. Most of these people come from nonendemic areas and have little to no immunity.

The exact number of temporary and migrant populations is not known but migration could be on the increase because of the economic slow down and the loss of jobs in the cities. One example of which is the garment workers in Phnom Penh. This could add to the problems by increasing urban to rural migration.

The movement of populations cannot be controlled in a free society and we have to work within these limitations. There is an information gap about mobile and migrant populations which needs to be filled. We have to agree to a process to close the gaps, which hopefully the planned situation analysis will add to our knowledge.

In closing, Dr Chea Nguon stressed that poverty is the root cause of migration. In accessing the mobile population it will be important to provide long-lasting insecticide treated nets (LLIN)/long-lasting insecticide treated hammock nets (LLHN) and artemisinin-based combination therapies (ACTs) free of charge to these populations.

Opening remarks
Mr Samart Vongprayoon, Containment Project Coordinator, BVBD

Mr Samart Vongprayoon also extended his welcome to the participants. He stressed that we need to study the populations who may spread malaria and thus resistant parasites. To this end, we must ensure cooperation between Thailand and Cambodia. We also need to improve the surveillance of cases. If a case occurs in Thailand they must be able to receive treatment in Thai health facilities. Even if they are not Thai nationals and if the case occurs in Cambodia, they should still be able to access treatment in Thailand.

Cooperation and collaboration with information technology will also be essential. Information systems will increase the possibilities of exchange of information between Cambodia and Thailand. Thai and Cambodian counterparts can already exchange information by email. Staff members should also make contact with NGOs and companies working in the border areas to increase their knowledge of the situation as containment of artemisinin resistant malaria parasites requires not only cooperation between countries but with other involved organizations as well.

Objectives of the meeting
Dr David Sintasath, Regional Epidemiologist, Malaria Consortium

Dr David Sintasath reviewed the overall aim of the project, which is to contain artemisinin resistant parasites by removing selection pressure and reducing and ultimately eliminating *Plasmodium falciparum* malaria.

Objectives of the Workshop

- To share information about mobile and migrant populations (i.e., defining who is a migrant, patterns of migration, identifying NGOs and community organizations working with migrants)
- To get an update on situational analysis of mobile and migrant populations in Thailand and Cambodia
- To share novel and creative approaches for the delivery of prevention, diagnosis and treatment of health and malaria interventions for mobile and migrant populations
- To formulate a working strategic framework to access mobile and migrant populations for the containment of artemisinin resistance

Overview of migrants and mobile populations
Ms Monique Filsnoel, Chief of Mission, International Organization for Migration (IOM)

An overview of migrants and mobile populations was delivered by Ms Monique Filsnoel, Chief of Mission, IOM Thailand, who brought along several members of her team to participate in this meeting. She urged us to continue to work together to address this dynamic and constantly evolving issue of migration.

Main Points

The IOM definition of ***migration*** is the process of moving across borders or within a state.

- Migration can be regulated or unregulated (includes trafficked and smuggled migrants). The majority of migrants are irregular and do not appear in government statistics. Thailand has memorandums of understanding (MOUs) with neighboring countries but the legal process is complicated and expensive. Recruitment agencies can make large profits from unregulated migrants.
- There are an estimated 1.3 million migrants in Thailand: 80% from Myanmar, 13% from Cambodia, and also from Laos, China and Vietnam.
- There a many reasons for migration, but most can be categorized into:
  Push factors: poverty, high fertility, no jobs available, political oppression
  Pull factors: unequal development (i.e., the rapid economic development of Thailand compared to its neighbors continues to attract migrants looking for work)
- Migrants can be men, women or children (traveling with families or alone). Migrants are predominately men in agriculture and construction, while mostly women in domestic work. Interestingly, the proportion of migrants is increasingly women.
- Out migration from Cambodia and Thailand occurs, mainly to Malaysia, the Gulf countries and South Korea
- Internal migration is most common in Cambodia (but also occurs in Thailand, where internal migrant have access to health care). Internal migration involves rural to rural as well as urban to rural and rural to urban movements.
- Cambodia also receives migrants from other countries, they mostly work in towns (but could be involved in construction and logging) and come from China, Vietnam and some from Thailand looking for forest products or intermarriage.
- Migration can be long or short term.
- Determinants of migrant health include: socio-economic background, work and housing conditions, and access to health care.

- Migrants are often exploited by employers particularly if they are illegal migrants

Migration in Thailand – What we know and challenges
Mr Samart Vongprayoon, Containment Project Coordinator, BVBD

Main points

- There is a high incidence of malaria on Thailand's western border and in the South East corner on the Myanmar border
- Information about migrants is obtained from government statistics. These statistics are gathered from village malaria workers, health centers and malaria posts and provincial health offices.
- At least 50% of migrants are unregistered. This is especially true for those migrants outside migrant camps where 80-90% are unregistered.
- In 2004, the total number of migrants was 1,847,525, which includes those possessing work permits (1,012,051) and those with health insurance (817,245).
- Demand for migrant labor is high - 1.2 million people passed through the official borders last year.
- 25% of migrants in the Thai/Cambodia border area are from Myanmar
- Data collection does not distinguish between legal and illegal migrants
- There is good cooperation between MOPH, IOM and other NGOs
- Epidemiological survey tool used to conduct a survey in three provinces of Tak, Ranong and Samouth Sakorn to gather data on migrants. Data collected included sleeping under a bednet, use of health services, symptoms experienced and diagnosis. When the survey tool is used regularly, it can detect trends in migrant health.

Challenges include:

- Migrant populations are dynamic
- Achieving good coverage of these target groups
- Establishing and maintaining communications with migrants who do not want to be known to authorities
- Lack of awareness of prevention measures
- Follow up of malaria cases among migrant populations

Migration in Cambodia: **What we know and challenges**
Dr Chea Nguon, Deputy Director, CNM

- The 2004 Cambodia Inter-Censal Population Survey (CIPS) showed that 4.5 million (1/3) of the Cambodian population were migrants (based on the fact that they had recently moved from their original villages). Reasons for migration included search of employment (13%), moving with family (50%), repatriation after the war (14%), and visiting with family (7%). There was a new census in 2008 whose results will be available in 2009. This new census will include migration within Cambodia, the

reasons for migration, the age/sex of migrants, the duration of stay the occupation and the educational level/literacy.

- Population movements can be daily, periodic, seasonal and long term. This classification has been developed for malaria control in the Malaria Control Strategic Plan (2006 – 2010).
- The main risk groups for malaria in Cambodia include the following:

Risk group	Ethnic group	Composi-tion	Access to health care	Immunity	Highest at risk
(A) *Traditional forest inhabitants* (montagnards)	Mixed non Khmer minority groups	Families	Little due to remoteness and linguistic barrier	Adults only	Children and pregnant women
(B) *Forest fringe inhabitants.* Make overnight visits to the forest to hunt & to collect construction wood /other products.	Khmer	Villagers (predominantly young men)	Relatively good in recent years	None	All age groups but the majority of cases are found in adult males.
(C) *Temporary migrants.* Individual forest workers, gem-miners, hunters, and others	Khmer and foreigners	Mostly adult males	Inadequate, but better than in (A) due to high mobility and more cash; private sector often preferred	Little or no immunity	Adult males
(D) *Organized groups*: plantation-workers, road-workers, military, police-forces	Khmer and foreigners	Mostly adult males	Usually good, as employers want to protect workers	None	Adult males, sometimes females or entire families
(E) *Refugees, displaced persons*	Khmer	Families	Relatively good in recent years	None	Children and adults alike
(F) *New forest settlers,* sometimes aftermath of (E)	Khmer	Families	None, not even private sector	Usually low	Children and adults alike

- **<u>Internal migrants</u>**: Different groups of mobile and migrant people have been described who might be at risk of malaria and might increase the risk of transmission. For Cambodia these include: Ethnic minorities (200,000), Forest fringe dwellers (1,300,000), and border crossers and temporary migrants (400,000). Many of these border crossers and temporary migrants who are attracted by the seasonal work often come from non-malarious areas and have little to no immunity. With the recent economic downturn, it is estimated that 10% of garment workers have become unemployed and may result in populations moving from urban to rural areas looking for work.
- The malaria programme might learn from the work done by the HIV/AIDS control programme (NCHADS) with migrants in Cambodia. A variety of surveys have been done which provide valuable information about migrants in Cambodia and some

Provincial Health Departments (PHD) keep track of new settlers and offer them ITNs and early diagnosis and treatment, etc.

- **Out-migration** from Cambodia does occur. The main destinations for Cambodian migrant workers are: Thailand, South Korea and Malaysia. There is anecdotal evidence of the presence of Cambodian migrant workers in Gulf Countries (Saudi Arabia and Qatar) and other Asian countries (Hong Kong, Taiwan, Japan, etc.), but there is no information available on their number and occupation.
- Thailand has become the prime destination for irregular Cambodian labor migrants. As of October 2005, there were 181,579 registered Cambodian labor migrants in Thailand (123,998 Male and 57,581 Female), representing approximately 13% of legal migrant workers in Thailand. The current figures may be lower because of fewer new work permits. It is estimated that there are another 180,000 undocumented migrants. Both for registered and undocumented migrants, the employment sectors with the highest number of Cambodian migrants are: fisheries (fishing boats or fish processing factories), construction and agriculture.
- Undocumented migration from Cambodia to Thailand is an increasing concern. Documented migrant workers in Thailand have limited access to health care and treatment services due to language and cultural barriers. Undocumented migrants, who are less visible and thus more difficult to reach by non-profit organizations, remain largely isolated from health care services. Poor living conditions and discrimination are just some of the difficulties Cambodian migrants face.
- Migration into Cambodia occurs for various reasons. Cambodia is a destination country for labor migrants, mainly from Viet Nam and China. The country has also been a major host for Vietnamese asylum seekers and refugees. Cambodia is a source and transit country for men, women, and children trafficked for commercial sexual exploitation and forced labor to Thailand and Malaysia. It is also a transit and destination country for Vietnamese and Chinese women and children for sexual exploitation.
- Migrants in Cambodia are equally distributed between males and females, but in rural areas it is more men. Of those who migrate, **62 % migrate within their own province**, 37% outside province but within Cambodia and only 4 % move outside Cambodia
- Migrants need LLINs as these are one of the most effective forms of prevention along with access to free diagnosis and treatment. This could be provided by Village Malaria Workers (VMWs) and Mobile Malaria Workers (MMWs). It is anticipated that MMWs will understand the migration networks that they are a part of but will need incentives to work.
- Migrants need information about prevention and the correct treatment which could be delivered on buses and taxi stands where migrants get transport but these messages must be appropriate for the needs of this population.
- There is a need for better information exchange between bordering countries about migrants and mobile populations.
- There has been considerable work on migrants and mobile populations in the past in Cambodia. The following table summarizes this work:

Risk group	Surveys & Research	Interventions

	NMCP	Other stakeholders	NMCP	Other stakeholders
Forest fringe inhabitants	Forest malaria study in Chumkiri district (2001)Cambodia Baseline Malaria Survey (2004)Cambodia Baseline Malaria Survey (2007)		Covered under NMCP	Social Marketing of Malarine, LLINs & ITKs by PSI with GF Round 2 & Round 4 support
Temporary migrants	Baseline survey and feasibility study for hammock net project (1998) Product and brand development (1999)CMBS (2004) & CMS (2007) had some questions	A Qualitative Study on Malaria Drug Use in Cambodia (RPM Plus, MSH) which also covered migrants	Pilot phase of Hammock Net Project (2000) Hammock net project (2001-02)	Social Marketing of Malarine, LLINs & ITKs by PSI with GF Round 2 & Round 4 support
Organized groups		Qualitative Study based on FGDs with migrant farm workers (URC, 2008)		Village Malaria Worker Project covering farm and mine workers (FHI in Pailin, 2007-08)
Refugees, displaced persons				
New forest settlers	Fever surveys in gem-mining settlements in Rattanakiri (2002-03) Suspected epidemic outbreak investigations (??)		PHDs in some provinces have been keeping track of new settlers & provided them with ITNs, EDAT, etc.	Village Malaria Worker Project (MSF in Pailin, 2003-07)

Challenges

- Locating mobile and migrant populations particularly in the light of recent changes in causes of migration (e.g. from closure of garment factories)
- Need for migrants (patients) to understand what drugs are acceptable
- Overcoming language barriers
- Need to inform people about new interventions, etc.
- Persuading unwilling traders/drug sellers to change their practices
- Countering deliberate misinformation on drugs
- Linking communications with assured availability of options that are promoted.

Country Plans

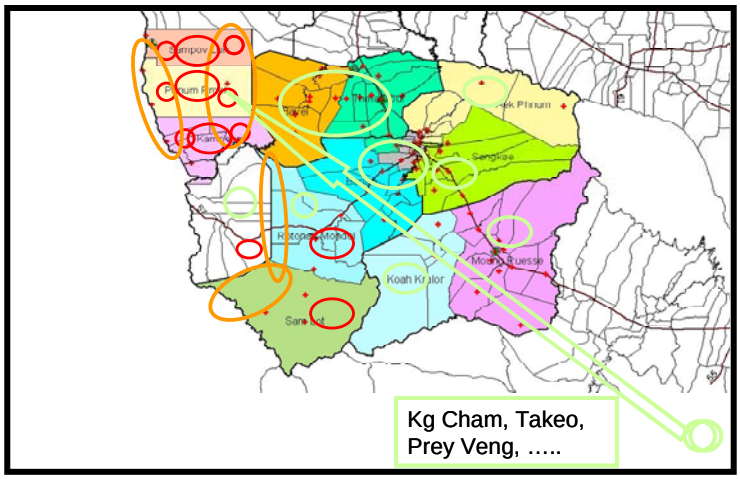
1. Contribute to situational analysis being carried out by TA supported by WHO
2. Finalize and begin implementation of Containment Project BCC strategy including for mobile/migrant populations

3. Select, train, position and equip Mobile Malaria Workers (contact points for mobile/migrant populations)
4. Distribute LLIHNs for populations making overnight stays in the forest
5. Participate in workshop for Cross-Border Strategy Development as well as in follow-up cross-border meetings
6. Implement other interventions following recommendations from situational analysis
7. Establish and maintain malaria surveillance and management system including data on mobile/migrant populations
8. Update situational analysis with regard to migrants in October '09 following publication of Final Results Census 2008 in Sep '09
9. Conduct Baseline survey in Oct '09 and follow-up survey embedded in CMS 2010 with a module on mobile/ migrant populations

Mobile and Migrant Workers in Malaria Endemic Areas along Cambodia-Thai Border
Dr Kheang Soy Ty, University Research Corporation

Main Points

- Dr Soy Ty gave a brief overview from the Assessment Workshop on Mobile and Migrant Populations held in Battambang & Sampov Loun ODs, Battambang Province in July 2008. The objective of this workshop was to gather information on mobile/migrant movement in target malaria endemic areas from health facility staff and commune chiefs.
- Key findings included that 1) people stay mainly for more than 1 month especially from other provinces; 2) People travel mainly by taxi or moto from other provinces or from other district in BTB; 3) the migration patterns of workers to/from Battambang provinces:



- Dr Soy Ty gave a second presentation on the qualitative research that URC conducted among mobile and migrant workers along the Cambodian-Thai borders. Understanding migration patterns, knowledge, concept, behaviors, and practices regarding to malaria prevention and treatment seeking behaviors could guide in developing effective strategic interventions among mobile and migrant workers.
- The objectives of the study described are the following:
  - Describe the migration pattern of mobile and migrant people in the malaria project areas

  - Gain better understanding on their knowledge and concept on malaria related issues, and behavior and practice in malaria prevention
  - Explore their knowledge, behavior, and practice on malaria treatment
  - Determine effective communication channel and strategy for health education
- Using focus group discussions in 4 areas Samlot, Pailin, Pnom Prek and Sampoaloun, some of the key results included:
  - Migrants come to this area for work in agriculture (planting and harvesting of corn, soy beans and cassava). Some get additional income from harvesting insects for food. Most are from outside the area (non malaria endemic areas) and return home after working.
  - Many travel by taxis, motorbikes, bus or in trucks owned by the employer. Work is usually arranged by individual farm owner, extended families, and/or previous experiences working with the employer. Some are frequent travelers, while others come for the first time usually with other more experienced workers. They stay for the whole period of work (6 – 8 weeks). Some come to rent land (paid for by clearing land for landlord) grow crops and may stay for up to 3 years. Some come with families, as couples, or alone or with other members of the same home village.
  - In terms of knowledge of malaria, most knew malaria was a serious problem in this area. Most know the symptoms of malaria, and knew that malaria could attack them after returning home. Traditional beliefs on causation were also very strong. Few believed mosquitoes alone could cause malaria. Many workers still used bednets and regarded mosquito nets as an essential household item.
  - Some used health facilities when they were ill but many used private medicine sellers to obtain treatment. Some had heard malaria messages on TV and radio but preferred to receive messages from health providers as they could ask questions and clarify meanings when in face to face encounters.
  - In Anlong Veng in Banteay Meanchey province, there were many unregistered villages of new settlers who had very limited access to care. These mobile populations are not familiar with local services that may be available.
- Field testing will be conducted on mobile & migrant workers in Chak Krey HC. The objectives will be to discuss with public health sector & local authority, brainstorm with community volunteers & HC staff, estimate # of mobile & migrant in the HC catchment area, prepare for nets distribution in the harvesting season in July. The strategy to be tested involves a system of retaining nets among the farm owners for future use. In other words, nets will be distributed to farm owners so that they keep them for the workers on their farm and replaced when needed. On smaller farms, nets will be distributed directly to individual workers.

Migrant situation in Malaysia
Dr Jiloris Dony, Sabah Area Medical Officer of Health, Ministry of Health, Malaysia

Main points

- Malaria in Sabah Island showed marked decrease between 1996 and 2008 (50,000 to 4,000 cases) but rate of decline among foreigners has been less dramatic. Half of all cases are among foreigners.

- Main source of migrants is Indonesia and the Philippines who work in agriculture and forestry and are often illegal but includes international tourists. About 80% of malaria cases occur among migrant workers. Most workers live in logging camps with poor living conditions. They are often accompanied by their families and camp owners do not provide good care for their workers. Access to services is poor due to remote areas and poor infrastructure.

Malaria Cases, by Citizenship in Sabah, Malaysia (2002-2007)

Citizenship	2002	2003	2004	2005	2006	2007
Malaysia	3,274 (64.3%)	1,124 (51.0%)	1,562 (57.0%)	1,645 (50.4%)	1,509 (49.8%)	1,704 (53.4%)
Indonesia	1,244 (24.4%)	794 (36.1%)	868 (31.6%)	1,238 (37.9%)	1,015 (33.5%)	1,106 (34.7%)
Philippines	564 (11.0%)	284 (12.9%)	303 (11.1%)	366 (11.2%)	360 (11.9%)	365 (11.4%)
Others	14 (0.3%)	0	8 (0.3%)	18 (0.5%)	145 (4.8%)	16 (0.5%)
Total	5,096	2,202	2,741	3,267	3,029	3,191

- When outbreaks are detected, there is a special outbreak investigation team that goes to the field to conduct investigations. Diagnosis is confirmed by microscopy.
- The Malaysian government has developed malaria control and elimination plans for 2010 - 2015. These include establishment of health posts for malaria detection and treatment and improvement of patient compliance with dosage regimes. For migrants the focus will be on camps and new employment sites in the forest. ITNs will be distributed to people who stay in the forest including timber workers hunters. Follow up of utilization of the nets will occur.

Comments

Points raised by Dr Soy Ty and Dr Ros Seyha involved the way migrants are accessed in Malaysia.

Dr Dony reported that many cases of malaria are imported by migrants and therefore there is a need to provide them with information on how to protect themselves against malaria and how to obtain treatment. This is especially important when opening up new areas of the forest. Private and public screening of migrants will be encouraged and regular border meetings with Indonesia to exchange information and improve education of incoming workers. Free bednets are also given to camp owners for distribution.

Update on situational analysis planned for Thailand and Cambodia
Dr James Eliades, WHO consultant

- Dr Eliades provided a brief overview of the methodology for "A Field Survey of Migrant and Mobile Populations in Cambodia and Thailand Using Respondent-Driven Sampling." More details of this methodology were presented and discussed on the third day.

- It is important to remember the overall goal of this survey is to characterize ***movement*** of migrant and mobile populations and potential ***points of access*** to develop coordinated multi-country action plans to better target them.
- The objectives of this survey include:
  - To define migratory patterns
  - To define health seeking behavior, barriers to access, and effectiveness of health messaging
  - To determine knowledge about malaria, and access and use of malaria control interventions
- Dr Eliades described the difficulties of sampling from this group/population and the various methods that have been used to access hard-to-reach populations. He described this novel method of respondent-driven sampling (RDS) which uses migrants to recruits other migrants, relies on social network of migrants, and is motivated by incentives to participate. This methodology relies on the selection of seeds to obtain further recruits through subsequent waves until the sample size is reached.
- The survey questionnaires will include questions regarding: Demographic information, Migratory patterns, Work history, Health care seeking behavior and barriers, Knowledge about malaria and use of malaria control interventions, and Exposure to health messaging.

Day 3: Discussion of survey issues

- Dr James Eliades gave a presentation outlining the steps for the situational analysis, which will include conducting formative focal group discussions in Thailand and in Cambodia. It was proposed that focus group discussions to guide the development of the surveys would be conducted in Trat and Chantburi provinces (Thailand) and in Pailin and Battambang provinces (Cambodia).
- Other topics for discussion include: Site selection, Staffing, Seed selection, Coupons, Incentives, and Forms
- Site selection: It was agreed that site selection will be important and will have to be somewhere migrants are comfortable coming to. These can be established health facilities (but needs to be verified), established public sites, rented spaces, and the sites must not change during the course of the survey, and must be able to provide appropriate privacy.
- Staffing: It was suggested that each site would be staffed with a site supervisor, coupon management and incentives, an interviewer/screener, and translator. It will also be important to consider workload issues and with whom would the migrants be comfortable speaking to.
- Seed Selection: The issue of seed selection is very important and will affect the sampling in the subsequent waves. Seeds should be diverse, be social and active members of their community, and a mixture of male and female.
- There was much discussion from the group regarding selection of seeds. Dr Soy Ty brought up the point that Cambodian farm owners might not be happy with their workers participating in such studies. Seeds selected in isolated farms where transportation is difficult may limit the ability of seeds to reach unknown networks. This may not be as much of an issue for Thailand as preliminary FGDs suggest that migrant

workers are more able to move around and farm owners are less restrictive of their workers movements and participation in such studies.

- Incentives: The issue of incentives was also discussed. It will be important to provide appropriate incentives to not lead to coercion. Further discussion of this will be needed to identify appropriate country-specific incentives.

Group Work

The participants were assigned to the following 4 working groups pertaining to migrants and mobile populations:

1. Prevention
2. Case management
3. BCC /IEC
4. M&E and surveillance

The first task of the groups involved 1) defining the issues, 2) the problems or challenges associated with the issues, 3) the activities or actions needed to overcome these problems and 4) the cross-border implications of the issues, problems and solutions. The outputs from the groups are compiled into the table below.

The second task of the groups was to develop the working plan of action. Prior to formulating the identified issues into specific objectives, the groups were asked to discuss their working definitions of *migrants* and *mobile populations*.

Each of the activities and actions identified in the previous exercise were developed further in a detailed action plan, which includes setting indicators for these actions, define who would be responsible for these actions and a time line for the actions to be achieved. Assumptions would need to be made to complete the plan.

Outputs

A. Definition of "migrant" versus "mobile population"

Thailand and Cambodia use different definitions for migrants and mobile populations but generally they are can be defined with regard to:

- Temporary vs permanent (time)
- Internal vs external
- Reasons for migration
- Operational definition (easy to reach, intermediate, hard to reach)

Migrant: The general definition of a migrant is any person who moves from one place to another. "External migration" refers to moving across international borders. On the other

hand, "internal migration" refers to movement from one area (province, district or municipality) to another within one country.

For our purpose which is containment of resistant malaria parasites, it was proposed that a migrant be described as anyone who moves out from their permanent residence and stays in a malaria endemic area for whatever purposes with regards to targeting malaria intervention. Therefore, operational definitions can be used to describe migrants as those who can be classified as ***easy-to-reach*** (e.g., within 5km of a health center), ***intermediate to reach*** (e.g., within reach of VMWs or MMWs), and ***hard-to-reach*** migrants (e.g., those who engage in illegal activities in the forest).

- In Cambodia, a migrant is anyone who moves across a border (provincial, national, or international).

- In Thailand, migrants are classified as internal or external. Internal migrants move from one province to another within the country. External migrants often come from Cambodia and Mynamar for economic reasons but not exclusively. While migrants can be classified as temporary or permanent, they are still migrants even after long period of time.

Mobile population: Any person who moves from one area to another (whether internally or externally) usually for a short period of time (less than one month)

- In Cambodia, a mobile person is anyone who has moved from a village outside the containment project area to within the area for any of the push/pull factors.

- In Thailand, the term “internal migrant” is generally used in place of “mobile population.”

B. Identification of Issues, Challenges and Solutions

Issues	Challenges	Specific actions required
Group 1: Prevention		
Access to mobile and migrant populations	Farm owners do not want to share information regarding migrant and mobile populations	• Meet with farm owners and local authorities to introduce objectives of the Containment Project
	Migrants/mobile populations stay for short periods of time and cross international borders	• Work with farm owners to share information about migrants
	Limited knowledge of networks of migrants and mobile populations	• Conduct situational analysis among mobile and migrant populations in Thailand and Cambodia
	Limited access to networks of migrants and mobile populations	• Select and train mobile malaria workers (MMWs) in the target areas to access these migrant networks

	Distribution of LLINs for mobile and migrant populations is difficult due to inability to quantify accurately population (demands for LLINs usually higher than estimated due to highly mobile population	• Work with local authorities to collect and update information on numbers of mobile and migrant populations
Group 2: Case Management		
Access to appropriate services among mobile and migrant populations	Difficult to identify network and location of migrant workers	• Investigate and identify network of organized/ unorganized migrant workers in remote areas (logging, mine, explore the forest products, etc) • Identify companies (road construction companies, logging companies, agricultural farms, etc) to inform them about the intervention and to quantify the needs for their employees
	CAM: Limited coverage of services for migrant populations working and staying outside the villages or in the remote areas: • remoteness: they tend to rely on stand-by treatment, • quality of information: mixed, lacked or inappropriate information • appropriate services: mixed/inappropriate services (mono-therapy, sub-standard/fake anti-malarial drugs, cocktail drugs)	• Standardize malaria diagnosis and treatment for private service in line with the public health service and make adequate/ appropriate anti-malarial available and accessible, according to the national policy • Provide appropriate information and effective communication to reach those groups • Need to develop appropriate national policy/regulation for improving the private health care services
	CAM: Limited coverage of services for isolated settlement (migrant) population	• Expand the community health network (VMW/MMW) – need to revise criteria to establish VMW/MMW service
	Limited information regarding migrant/mobile population on available service and their right to (freely) access to malaria diagnosis and treatment	• Provide appropriate information and effective communication to target population through appropriate channels
	Inadequate or timely supplies (blood test & anti-malarial drugs) for diagnosis and treatment	• Ensure proper planning, effective management and coordination at all levels
Group 3: BCC/IEC		
Lack of communication	Migrants come from various countries, speaking various languages	• Develop tools in specific languages
	Low literacy among migrants and mobile populations	• Design, develop, and field test pictorial media that is useable across languages and cultures
	Limited knowledge and awareness about containment issues among	• Conduct trainings and workshops for private providers

	private providers	• Establish malaria corners in private businesses along the border
	Limited awareness among consumers	• Distribute materials and multimedia to promote consumer awareness
	Weak cross-border communications between Thailand and Cambodia regarding containment issues and messages	• Form cross border committees for information sharing • Exchange presentations, key messages, and information by email • Develop generic tools for countries to adapt • Conduct containment campaigns at border check points • Develop bilingual billboards along the border
	Weak coordination and cooperation for stakeholder	• Conduct stakeholders workshops for information sharing • Conduct joint Malaria Day Campaigns (25 April) in Thailand and Cambodia
Lack of awareness	Limited methodologies to access/target migrant and mobile populations	• Develop new methodologies to reach mobile and migrant populations, including placing information in taxis and buses • Provide malaria information in workplaces
	Lack of targeted interventions	• Identify MMWs, farm/factory owners, monks, employers, and village chiefs • Conduct informal trainings for above
Lack of accessibility	Accessing hidden and illegal migrants	• Target delivery of health messages through employers • Increase awareness and government advocacy for hidden and illegal migrants through governments
	Knowing where target groups are located and their needs	• Share information between stakeholders on where to locate target groups
Group 4: M&E and Surveillance		
Finding mobile/migrant people who are difficult to find: **THA:** Illegal foreigners plus highly mobile internal migrants **CAM:** Mobile Internal migrants	Accessing target populations involved in Illegal activities in the forest	• Migrant Health Workers (THA) to collaborate with employers of illegal migrants • Migrant Malaria Workers (CAM) require specific training in mobile population plus MMW required
	Accessing mobile and migrant populations in remote areas	• Collaborate with village chiefs for monitoring of migrants
	Employer cooperation (employers doing illegal activities not likely to cooperate)	• Work with employers of migrants and mobile populations • Ensure incentives for employers to cooperate

	Cross-border communication and information sharing	• Conduct regular cross-border meetings • Set up information sharing mechanisms • Utilize border malaria posts (already in THA) and planned for CAM for information sharing
	In Cambodia, there is the challenge of selecting MMWs	• Select MMWs who are part of the migrant and mobile populations networks, but are not highly mobile
Difficulty in conducting case follow up among migrants and mobile populations	**THA:** Low follow up rates for mobile populations because they often move on after diagnosis **CAM:** currently only passive case detection and follow-up	• CAM to examine Thai method of case follow up • CAM to use VMWs to implement case follow up for mobile populations • THA to use RDTs and slides for outreach of migrants • THA to share information about all Cambodian malaria cases treated in Thailand • Give referral document to Cambodians seeking treatment in THA • In future, harmonization of MIS systems to include information on mobile and migrant populations
Legal issues	**THA:** status of illegal migrants (overcoming fear of being reported) **CAM:** illegal activities (working in the forest)	• Conduct outreach activities to educate migrants about their rights through Migrant Health Workers (THA) and MMW/VMWs (CAM) • Share experiences in cross-border meetings and international malaria cross-border meetings

C. Proposed Framework and Action Plan

Overall Goal: To contain the spread of artemisinin-resistant malaria parasites among migrant and mobile populations

Objective 1: To provide malaria prevention measures by accessing migrant and mobile population networks

Activity	Indicator	Means of Verification	Responsibility and *Timeframe*	Important Assumptions
1.1 Meeting with farm owners and local authorities to introduce objectives of the Containment Project	Number of meetings conducted with farm owners and local authorities	Minutes from meetings	**CAM:** CNM – PHD/OD **THA:** BVBD – OPC, BVBC, BVBU *By end Q3 of 2009*	Budget for meeting available
1.2 Conduct situational analysis among mobile and migrant populations in Thailand and Cambodia	Situational analysis conducted	Report of situational analysis	WHO/SEARO consultant *By end Q3 of 2009*	
1.3 Organize meeting with OD/PHD for training of trainers (TOT)	Number of TOTs conducted	Report of TOT training	**CAM:** CNM – PHD/OD **THA:** BVBD – OPC, BVBC, BVBU *By end Q3 of 2009*	Budget available
1.4 Select and train mobile malaria workers (MMWs) in the target areas to access these migrant networks	Number of MMWs recruited and trained	Report of training/list of participants	**CAM:** CNM – PHD/OD **THA:** BVBD – OPC, BVBC, BVBU *By end Q3 of 2009*	Budget, drugs, supplies available
1.5 Work with local authorities to collect and update information on numbers of mobile and migrant populations	Number meetings with local authorities	Minutes from meetings	**CAM:** CNM – PHD/OD **THA:** BVBD – OPC, BVBC, BVBU *By end Q3 of 2009*	Budget available
1.6 Monitor LLIN distribution to migrant and mobile populations in target areas	% of target population covered with LLIN	Rapid assessment survey	**CAM:** CNM – PHD/OD *By Q4 of 2009*	Budget available

Objective 2: To improve access to malaria case management (enabling environment) by migrant and mobile populations

Activity	Indicator	Means of Verification	Responsibility and *Timeframe*	Important Assumptions
2.1 Investigate and identify networks of organized/ unorganized migrant workers in remote areas (logging, mine, explore the forest products, etc)	Number of networks of organized and unorganized migrant workers identified	Report submitted	**CAM:** CNM – OD malaria units **THA:** BVBD – VBDC units *By Q3 of 2009*	National programme will initiate and provide guidance to OD (CAM) and VBDC (THA) units; available budget for implementation
2.2 Identify companies (road construction companies, logging companies, agricultural farms, etc) to inform them about the intervention and to quantify the needs for their employees	Number of private companies contacted	Report submitted	**CAM:** CNM – OD malaria units **THA:** BVBD – VBDC units *By Q3 of 2009*	
2.3 Review national policy / regulation for improving the private and public health care services	National policy reviewed and updated	Policy paper approved by MOH	**CAM:** Refer to Private-Public Mix Partnership Strategy *By Q4 of 2009*	PPM Strategy implemented
2.4 Provide appropriate information and effective communication to target population through appropriate channels	Proportion of migrants and mobile populations reached with key messages	Special survey	**CAM:** Refer to BCC/IEC; technical support provided by MC *By Q4 of 2009*	BCC/IEC strategy implemented

Objective 3: To increase access to malaria diagnosis and treatment for intermediate to reach migrants and mobile populations through the establishment of Mobile Malaria Workers (MMW) network

Activity	Indicator	Means of Verification	Responsibility and *Timeframe*	Important Assumptions
3.1 Organize workshop for HC staff on process of establishment of MMW network	Number of HC staff attending workshop	Workshop report	**CAM:** OD malaria unit with support from PMS *By end of Q3 of 2009*	Budget available

3.2 Identify target areas/clusters considered as intermediate to reach migrants	Number of target areas identified	Fieldwork report	**CAM:** OD malaria unit *By Q3 of 2009*	Budget available; intermediate to reach migrants are identifiable
3.3 Identify and select MMWs	Number of MMWs recruited	Fieldwork report	**CAM**: OD malaria unit with support from PMS *By end of Q3 of 2009*	Budget available
3.4 Provide training to MMWs	Number of MMWs trained	Training report	**CAM**: OD malaria unit with support from PMS *By end of Q3 of 2009*	Budget for training available
3.5 Supply MMWs with adequate intervention packages (RDTs and ACTs)	% of MMWs reporting no shortages of ACTs and RDTs during the past 3 months	VWM/MMW reports	**CAM:** CNM **THA:** VBCDP *By Q3 of 2009*	Supplies of ACTs and RDTs are available
3.6 Procure motorcycles for MMWs to conduct case follow up and active case detection	Number of motorcycles procured	Procurement report	**CAM:** CNM *By Q3 of 2009*	Budget available (as planned)
3.7 Support MMW/MMC for ACD in target clusters/villages	Number of clusters/villages conducted for ACD	Case investigation reports	**CAM:** HC **THA:** MMC *By Q4 of 2009*	Budget available

Objective 4: To strengthen the coordination and management mechanisms for adequate and timely supplies

Activity	Indicator	Means of Verification	Responsibility and *Timeframe*	Important Assumptions
4.1 Conduct consultative meetings to enable proper supply management, planning, and implementation	Number of meetings conducted	Effective operational supply management plan available	**CAM:** CNM *By Q4 of 2009*	Budget available
4.2 Conduct regular supervision by HC staff to target MMW areas	Number of supervisory visits conducted	Supervision reports (monthly)	**CAM:** Provincial Malaria Unit **THA:** VBDC	Budget and staff available
4.3 Conduct regular supervision from ODs to target MMW areas	Number of supervisory visits conducted	Supervision reports (monthly for first 6 months, then bimonthly)	**CAM:** OD Malaria Unit **THA:** VBDC	Budget and transportation for supervision available

4.4 Conduct regular supervision from Province to target MMW areas	Number of supervisory visits conducted	Supervision reports (monthly for first 6 months, then bimonthly)	**CAM:** PMS **THA:** VBDU	Budget and transportation for supervision available
4.5 Conduct regular supervision from central level to HC with MMWs	Number of supervisory visits conducted	Supervision reports (quarterly)	**CAM:** CNM **THA:** BVBD	Budget and transportation for supervision available
4.6 Procure and provide motorcycles to HC with MMWs	Number of motorcycles procured and distributed	Procurement and supply report	**CAM:** CNM *By Q4 of 2009*	Budget and transportation for supervision available
4.7 Support for communication (phone cards) to HC	Number of HC receiving phone card in the previous 3 months	Monthly HC reports	**CAM:** OD Malaria Unit	Budget available
4.8 Support MMWs to attend meetings at HC	Number of MMW attending meetings	MMW meeting reports	**CAM:** Health Center	Budget available and allocated
4.9 Support HC for conducting investigation in target clusters covered by MMW activities	Number of clusters/villages investigated	Investigation reports	**CAM:** CNM	Budget available and allocated

Objective 5: To increase awareness of malaria prevention, treatment, and diagnostic messages for and among migrant and mobile populations

Activity	Indicator	Means of Verification	Responsibility and *Timeframe*	Important Assumptions
5.1 Conduct stakeholders workshops for information sharing and strategy refinement	Number of stakeholder meetings	Meeting report	Provinces and districts 2x per year	Budget available
5.2 Conduct trainings and workshops for public and private providers regarding key messages for mobile and migrant populations	Number of providers participating in workshops	Participant list	Provinces and districts Quarterly *By Q4 of 2009*	Budget available
5.3 Distribute materials and multimedia to promote consumer awareness	Number of materials and multimedia distributed	Distribution report	CNM/BVBD Quarterly *By Q4 of 2009*	Budget and materials available; materials prepared on time

5.4 Form cross border health committees for information sharing	Number of cross-border health committees established	Meeting report	Provinces and districts Quarterly *By Q3 of 2009*	Budget and time available
5.5 Identify and conduct informal trainings for MMWs, farm/factory owners, monks, employers, and village chiefs	Number of participants trained	Meeting report	PHD/OD/HC BVBD/VBDU/MP/MC *By Q3 of 2009*	Budget and participants have time to participate
5.6 Increase awareness and government advocacy for hidden and illegal migrants	Number of advocacy events for hidden and illegal migrants	Advocacy reports	CNM/BVBD communications units Annual	Issue of hidden and illegal migrants can be openly discussed
5.7 Conduct joint Malaria Day Campaigns (25 April) in Thailand and Cambodia	Number of joint Malaria Day campaigns	Activity reports	National, Provincial and districts *Q2 of 2010*	

Objective 6: To target communications of health education messages for migrants and mobile populations

Activity	Indicator	Means of Verification	Responsibility and *Timeframe*	Important Assumptions
6.1 Target delivery of health messages through employers by establishing malaria corners in private businesses along the border	Number of malaria corners in private businesses	Supervision reports	**THA:** BVBD/Provinces *By Q3 of 2009*	Businesses are willing to participate
6.2 Develop and share generic tools for each country to adapt	Number of generic tools developed and emailed between THA and CAM	Annual reports	CNM/BVBD Communications Units *By Q3 of 2009*	
6.3 Design, develop, and field test pictorial media that is useable across languages and cultures	Number of pictorial media produced	Annual reports	CNM/BVBD Communication Units *By Q3 of 2009*	
6.4 Develop bilingual billboards along the border	% of respondents who can recall billboard messages	Special survey	CNM/BVBD Communication Units *By Q3/Q4 of 2009*	Billboards are effective media tools
6.5 Conduct containment campaigns at border check points	Number of border check points with containment campaign	Supervision reports	Provinces *By Q4 of 2009*	Border check points are willing to participate

6.6 Develop new methodologies to reach mobile and migrant populations, including placing information in taxis and buses	% of respondents who have received IEC messages from taxis and buses	Special survey	CNM/BVBD Communication Units *By Q4 of 2009*	Messages in taxis and buses are effective
6.7 Exchange presentations, key messages, and information by email	Number of key messages developed through email exchanges between THA and CAM	Annual reports	CNM/BVBD Communication Units *By Q3 of 2009*	

Objective 7: To strengthen monitoring of and access to migrants and mobile populations who are difficult to find

Activity	Indicator	Means of Verification	Responsibility and *Timeframe*	Important Assumptions
7.1 In Thailand, identify Malaria Post Workers to collaborate with employers of illegal migrants	Number of employers who are involved in the project	Annual report	**THA:** VBDC/VBDU *By Q3 of 2009*	Employers are willing to cooperate
7.2 In Cambodia, train Migrant Malaria Workers (MMWs) in how to reach migrant and mobile populations	Number of MMWs trained	Training reports	**CAM:** CNM/PHD *By Q3 of 2009*	3 MMWs proposed per HC in Zones 1 and 2
7.3 Conduct meetings with village chiefs/village health volunteers for monitoring of migrants flow and movements	Number of meetings at village level	Meeting reports	**THA:** VBDC/VBDU **CAM:** PHD/OD/HC *By Q3 of 2009*	Regular meetings with HC and village chiefs are held
7.4 Conduct meetings with local authorities to discuss migrant and mobile population situation	Number of meetings with local authorities	Meeting reports	**CAM:** CNM/PHD/OD *By Q4 of 2009*	Local authorities can lobby hidden companies working in the forest

Objective 8: To improve case follow up of migrant and mobile populations through a harmonized surveillance system

Activity	Indicator	Means of Verification	Responsibility and *Timeframe*	Important Assumptions
8.1 Facilitate follow-up study visits by Cambodia to review the Thai method of case follow up	Study trip conducted	Action points resulting from the meeting	CNM/BVBD *Visit conducted to BIOPICS and BVBD in June 2009*	
8.2 Utilize Malaria Workers and MMWs to implement case follow up for migrant and mobile populations	**THA:** At least 50% of migrant patients are followed up **CAM:** number of malaria patients referred to health facilities after 3-day treatment	Case follow up reports	**THA:** VBDC/VBDU **CAM:** HC/OD/MMW *By Q4 of 2009*	In zones 1 and 2 of Cambodia; all malarious areas of Thailand
8.3 In Thailand, use RDTs (as well as microscopy, if possible) for outreach of migrants in remote areas	**THA:** 90% of migrant patients are diagnosed by RDTs/microscopy during outreach activities	Outreach activity reports	**THA:** VBDC/VBDU *By Q4 of 2009*	
8.4 Thai side will share summary information about all Cambodian malaria cases treated in Thailand	Number of cross-border meetings to share information	Meeting report	BVBD/VBDC/VBDU CNM/PHD/OD/HC *By Q3 of 2009*	Thai forms will include cases by nationality
8.5 Thai side will provide bilingual referral cards/documents to Cambodian patients for case follow up and monitoring in Cambodia	90% of migrants receive referral cards	Case follow up reports	BVBD/VBDC/VBDU CNM/PHD/OD/HC *By Q4 of 2009*	Bilingual referral cards can be used to monitor treated cases across the border

Summary and Recommendations

- Information on migrants and mobile populations exists and many organizations are working with these vulnerable populations, particularly along the border areas. There is an urgent need to consolidate existing data on migrants/mobile populations so that we can understand what information is already available and be able to identify the gaps for further operational research. Some rapid mapping activities may be needed – including of farm owners and private companies and industries.

- Different definitions for migrants and mobile populations are being used in Cambodia and Thailand which may include aspects of temporary versus permanent, internal/external, and reasons for migration. It was suggested at this workshop to use a more operational definition for migrants who move into and out of the containment zones as easy-to-reach, intermediate, and hard-to-reach. Furthermore, national policy for dealing with migrants and mobile populations should be advocated at higher levels.

- Since migrant workers generally move from one location to another looking for work, involvement of the private sector will be important to help us access these migrant and mobile populations. Novel approaches were shared at the workshop (i.e., malaria corners in private businesses, taxi drivers to distribute messages, and use of farmer owners to distribute LLINs, etc). However, there is a need to further develop new approaches and innovative ideas for both countries to reach these hard-to-reach populations.

- Mobile/Migrant Malaria Workers (MMWs) introduced in the Containment Project Strategy aims to specifically address containment of artemisinin resistant malaria among mobile and migrant populations. However, the roles of MMWs need to be more clearly defined (i.e., case management, ACD, case follow-up, referral system) as well as the selection criteria for these individuals needs further clarification.

- BCC/IEC messages and strategies for migrants and mobile populations should be harmonized between Thailand and Cambodia to ensure that messages are targeted and appropriate for these populations.

- The proposed situational analyses to be conducted in both Thailand and Cambodia will provide the much needed information on potential networks of migrants and mobile populations. The migrant situations are very different between the two countries, and it will be important to address these needs separately to adequately capture the relevant information. Focus group discussions among migrants and mobile populations along the border will be one of the first steps in providing key information on how to design and adapt the situational analyses for both countries.

- There is a need to strengthen cross-border communications and collaboration (including for case detection and follow up and routine surveillance) by identifying commonalities on both sides and facilitating information sharing (e.g., lessons learned from THA surveillance system). Community-based malaria data (including for migrant and mobile

populations) should be integrated into other information systems (such as HIS) in the long-term.

- Good ideas were shared and developed during the course of this workshop, which has provided a basis for development of a detailed action plan and framework.

- Focal persons for migrants/mobile populations in Cambodia (Dr Chea Nguon) and Thailand (Ms Piyaporn Wangroongsarb) will review the action plan and continue to work together to make sure the action plan can be implemented in a timely and coordinated manner.

Next steps

- National programs, with technical input from partners and WHO, will decide what data is required to be collected from migrants and mobile populations and what minimum information needs to be exchanged between Thailand and Cambodia.

- A website needs to be created for such information to be shared between the two countries, partners, and the malaria community at large. Further discussion is needed about who will develop and maintain such a cross-border website.

- National programs will establish and strengthen engagements with the private sector (e.g., malaria corners in Thailand, distribution of LLINs through employees, and possibly tap into their access to migrant networks). They will also encourage the involvement other partners, stakeholders, local authorities, etc who are working with migrants and mobile populations.

- Focus group discussions will be conducted as soon as possible among migrants and mobile populations along the border to guide the design of the situational analysis, and the results will be used by the National Programs to improve their strategies to reach migrants and mobile populations.

- The draft report and action plan will be distributed to country focal persons and other relevant individuals for further refinement and incorporation into existing plans of action if possible. National Programs need to endorse this action plan and begin implementation of these activities.

Annex 1. Workshop on Development of a Strategy to Contain Artemisinin Resistant Malaria among Migrants and Mobile Populations

Century Park Hotel, Bangkok
8 – 10 June 2009

AGENDA

Objectives:

- To share information about mobile and migrant populations (i.e., defining who is a migrant, patterns of migration, identifying NGOs and community organizations working with migrants)
- To get an update on situational analysis of mobile and migrant populations in Thailand and Cambodia
- To share novel and creative approaches for the delivery of prevention, diagnosis and treatment of health and malaria interventions for mobile and migrant populations
- To formulate a working strategic framework to access mobile and migrant populations for the containment of artemisinin resistance

Monday 8 June 2009

08:30 – 09:00	Registration	
09:00 – 09:15	Opening remarks and welcome	Dr. Najib Habib, WHO Dr. Samart Vongprayoon, BVBD Dr. Chea Nguon, CNM
09:15 – 09:20	Introduction of participants	
09:20 – 09:30	Containment Project Overview	Dr. Najib Habib, WHO
09:30 – 09:35	Objectives of the meeting	Dr. David Sintasath, MC

Objective 1: To share information about mobile and migrant populations

09:35 – 10:00	Overview of migrants and mobile populations	Ms. Monique Filsnoel, IOM
10:00 – 10:30	Migrants in Thailand: what we know and challenges	Mr. Samart Vongprayoon, BVBD
10:30 – 11:00	TEA BREAK (& Group Photo)	
11:00 – 11:30	Migrants in Cambodia: what we know and challenges	Dr. Chea Nguon, CNM
11:30 – 12:00	Mobile and Migrant Workers along Cambodia-Thai border	Dr. Kheang Soy Ty, URC
12:00 – 12:30	Discussion	
12:30 – 14:00	LUNCH	
14:00 – 14:30	Migrant situation in Malaysia	Dr. Jiloris Dony, MOH Malaysia

Objective 2: To get an update on situational analysis of mobile and migrant populations in Thailand and Cambodia

14:30 – 15:00	Situational analysis: update and discussion	Dr. Jamie Eliades, WHO

Objective 3: To develop novel and creative approaches for the delivery of prevention, diagnosis and treatment of malaria interventions for mobile and migrant populations

15:00 – 15:30	TEA BREAK	

15:30 – 17:30	Group Work: Prevention, Case Management, BCC/IEC, M&E and Surveillance 1) Identify issues and problems/challenges 2) Solutions to problem – what specific actions or activities are required? 3) Cross-border collaboration	

Tuesday 9 June 2009

Objective 4: To formulate a working strategy or framework to address issues pertaining to mobile and migrant populations with regards to the containment strategy

08:30 – 08:45	Group Work (continued)	Dr David Sintasath, MC
08:45 – 10:30	Group Work: Development of Framework and Action Plan - Specific Objectives - Activities - Indicators - Means of Verification - Responsibility and timeframe - Assumptions	
10:30 – 10:50	TEA BREAK	
10:50 – 11:20	Group 1: Prevention	Group rapporteurs
11:20 – 11:50	Group 2: Case Management (including diagnosis)	Group rapporteurs
11:50 – 13:30	LUNCH	
13:30 – 14:00	Group 3: BCC/IEC	Group rapporteurs
14:00 – 14:30	Group 4: M&E and Surveillance	Group rapporteurs
14:30 – 14:50	TEA BREAK	
14:50 – 16:00	Next Steps: Action plan, discussion, conclusions, and recommendations - What data needs to be collected? - Cross-border information exchange – what information needs to be exchanged? - How do we involve other partners, stakeholders, agencies? - How do we involve private sector? - Need to identify focal persons for migrants/mobile populations in Cambodia and Thailand	
16:00 – 16:15	Closing Remarks	Dr Charles Delacollette, WHO

Wednesday 10 June 2009

9:00 – 12:00	Training session on Respondent-Driven Sampling (For National and Provincial Programme Staff and those interested)	Dr Jamie Eliades, WHO