



# **MALARIA CONTROL PROGRAMME IN THAILAND**

***Dr. Wichai Satimai, Director***

***Bureau of Vector Borne Disease,  
Department of Disease Control,  
Ministry of Public Health,  
Thailand.***

# The Success of Current Control Program

- Goal
- General objectives
- Malaria control strategies
- Malaria situation, 2008
- Key challenges and constraints of the Thai Malaria Control Programme
- Containment of multi-drug resistant
- Containment of the constraints to malaria elimination
- Lesson learnt from Global Fund Project Round 2
- Global Fund Project Round 7

## **Goal**

**To reduce malaria morbidity and mortality rates and the suffering and distress caused by malaria.**

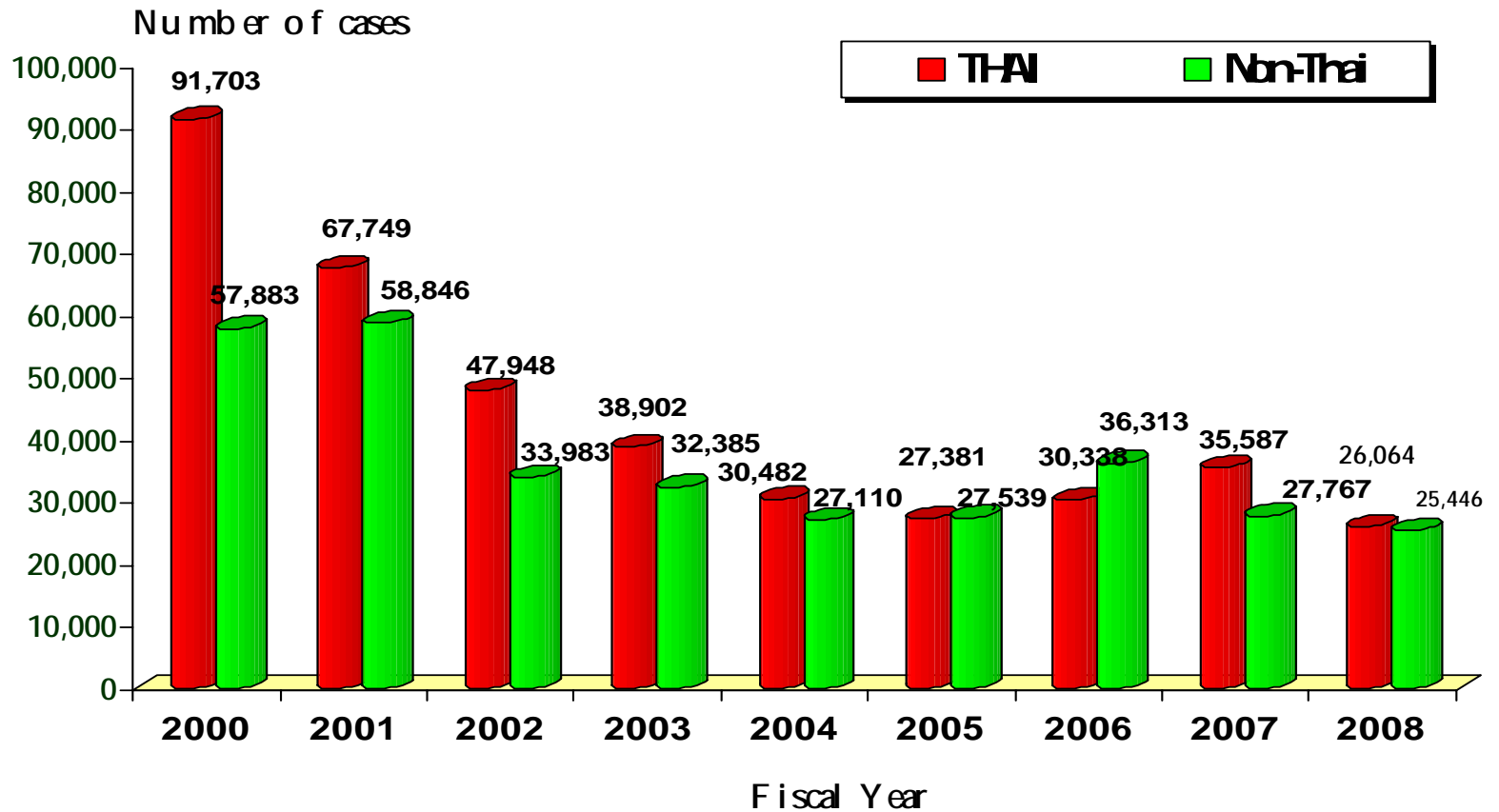
## **General Objectives:**

- **To reduce malaria morbidity and mortality rates in 30 border provinces**
- **To prevent re-establishment of malaria transmission in non-transmission areas**
- **To enhance development of healthy behavior among the population and to strengthen community participation in prevention and control of malaria.**

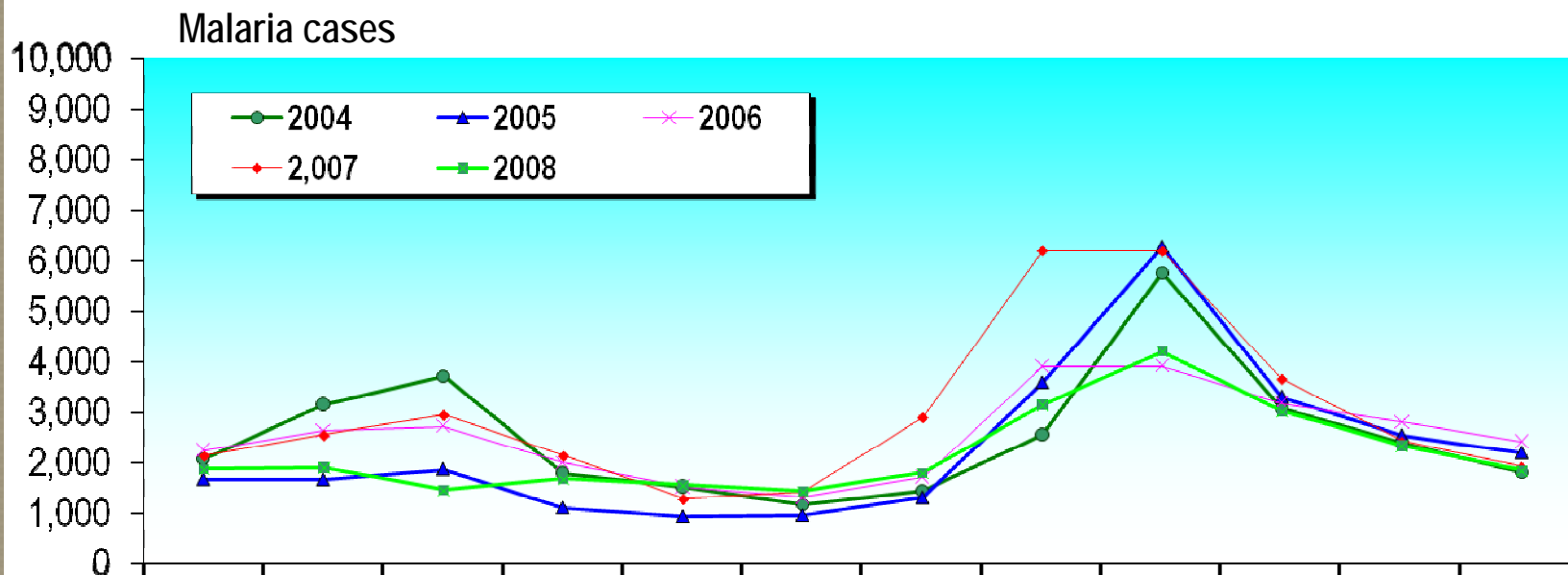
# **Malaria Control Strategies**

- **Disease Prevention and Control**
- **Building of malaria surveillance networking at periphery.**
- **Strengthening decentralization of malaria prevention and control to local organizations.**
- **Development of Human resource and appropriate malaria control strategies to cope with dynamic malaria situation.**
- **Promotion of collaboration regarding malaria control in border areas.**
- **Establishment of a Training Network for human resource development.**

# Thai and Non-Thai malaria cases Fiscal Year 2000-2008



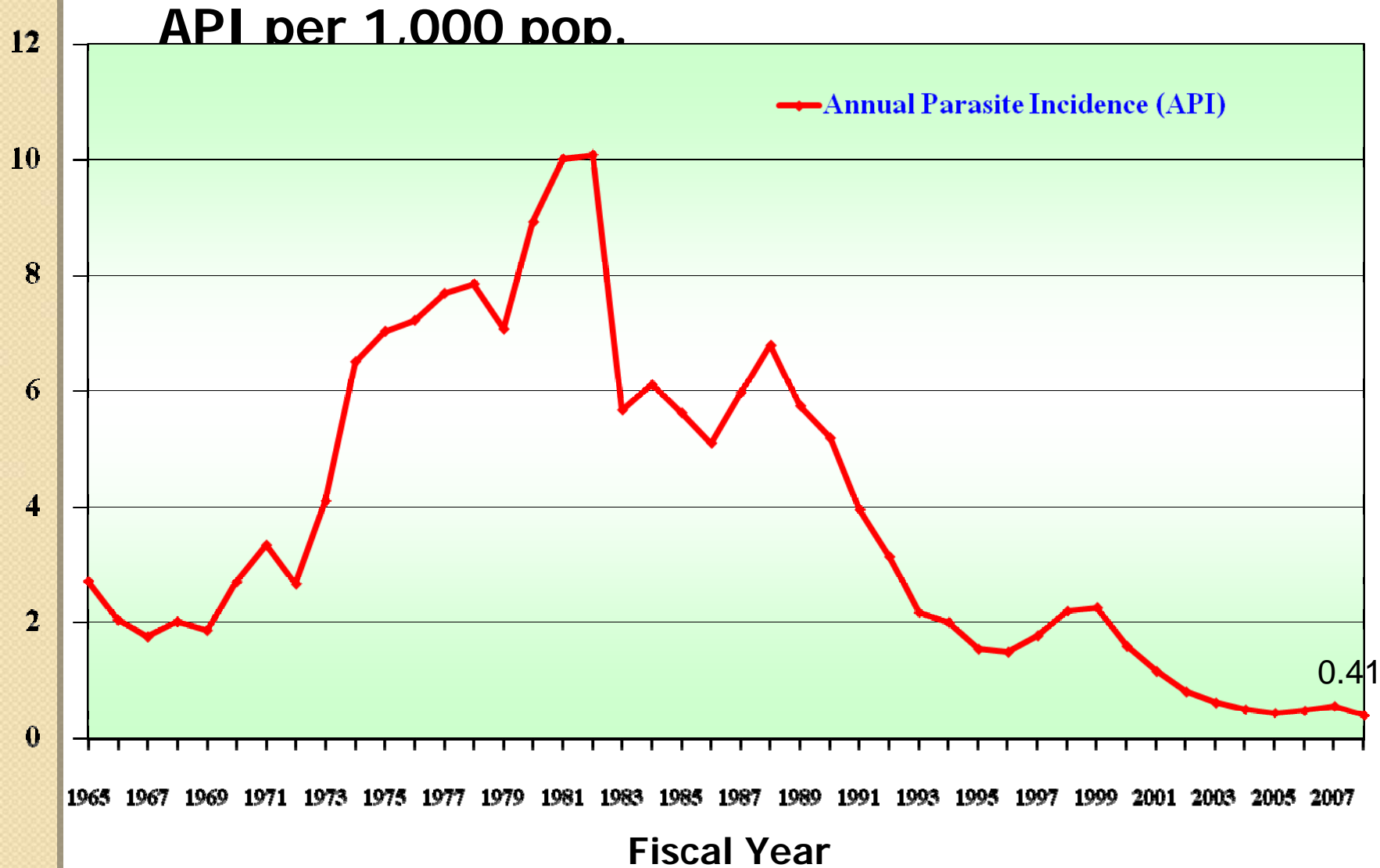
# Monthly malaria cases, FY 2004-2008



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
● 2004	2,057	3,144	3,688	1,772	1,503	1,157	1,422	2,545	5,743	3,061	2,384	1,788
▲ 2005	1,667	1,663	1,866	1,107	927	955	1,306	3,581	6,271	3,300	2,539	2,199
✕ 2006	2,252	2,628	2,717	1,990	1,518	1,318	1,717	3,902	3,904	3,180	2,796	2,416
◆ 2,007	2,125	2,537	2,930	2,128	1,273	1,407	2,884	6,176	6,169	3,638	2,408	1,903
■ 2008	1,861	1,892	1,441	1,660	1,534	1,419	1,779	3,129	4,188	3,005	2,327	1,833

Month

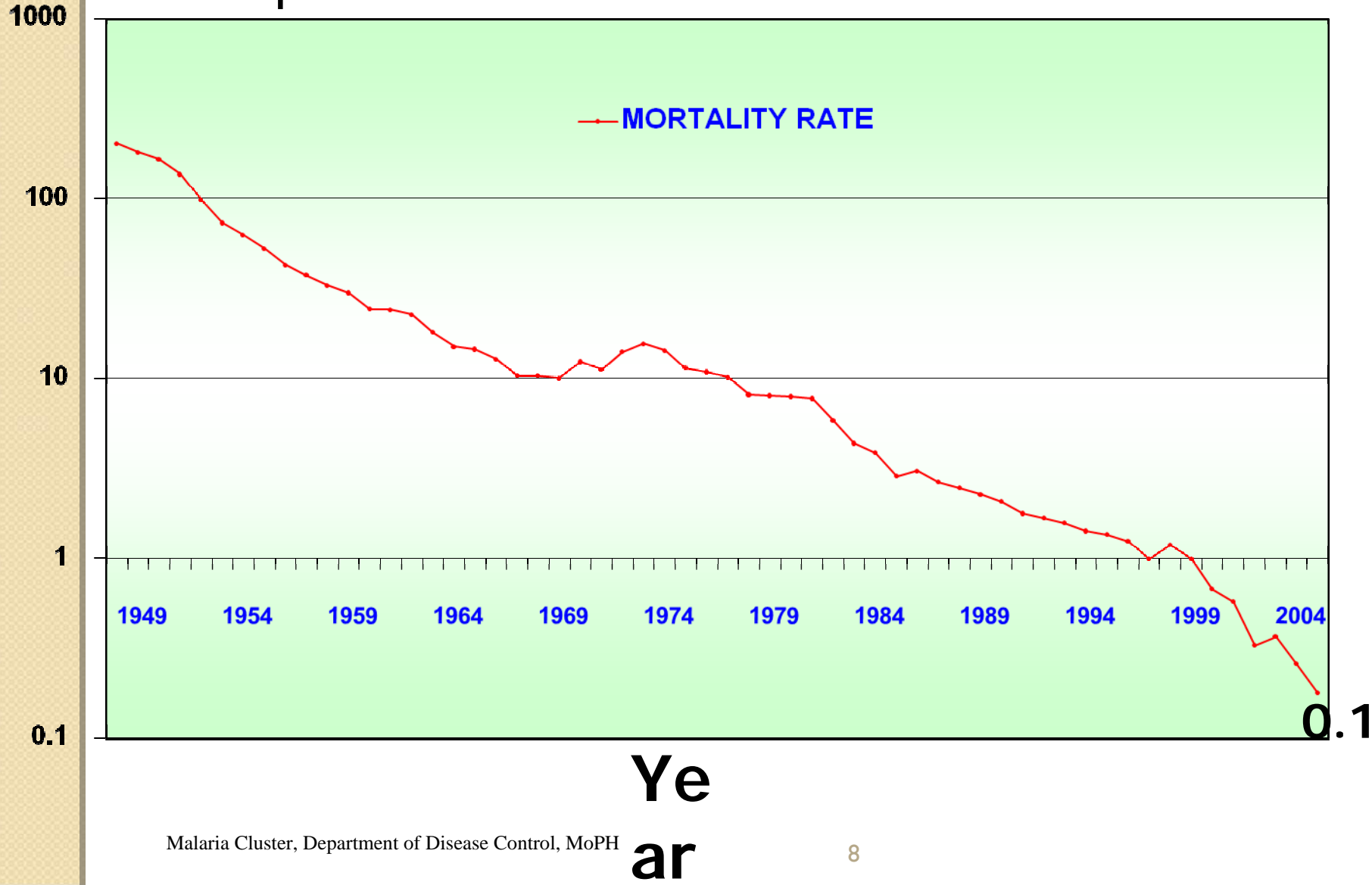
# Annual Parasite Incidence (API), Thailand, 1965-2008



Source: Malaria Cluster, Department of Disease Control, MoPH

# Malaria Mortality Rate, Thailand, 1949-2007.

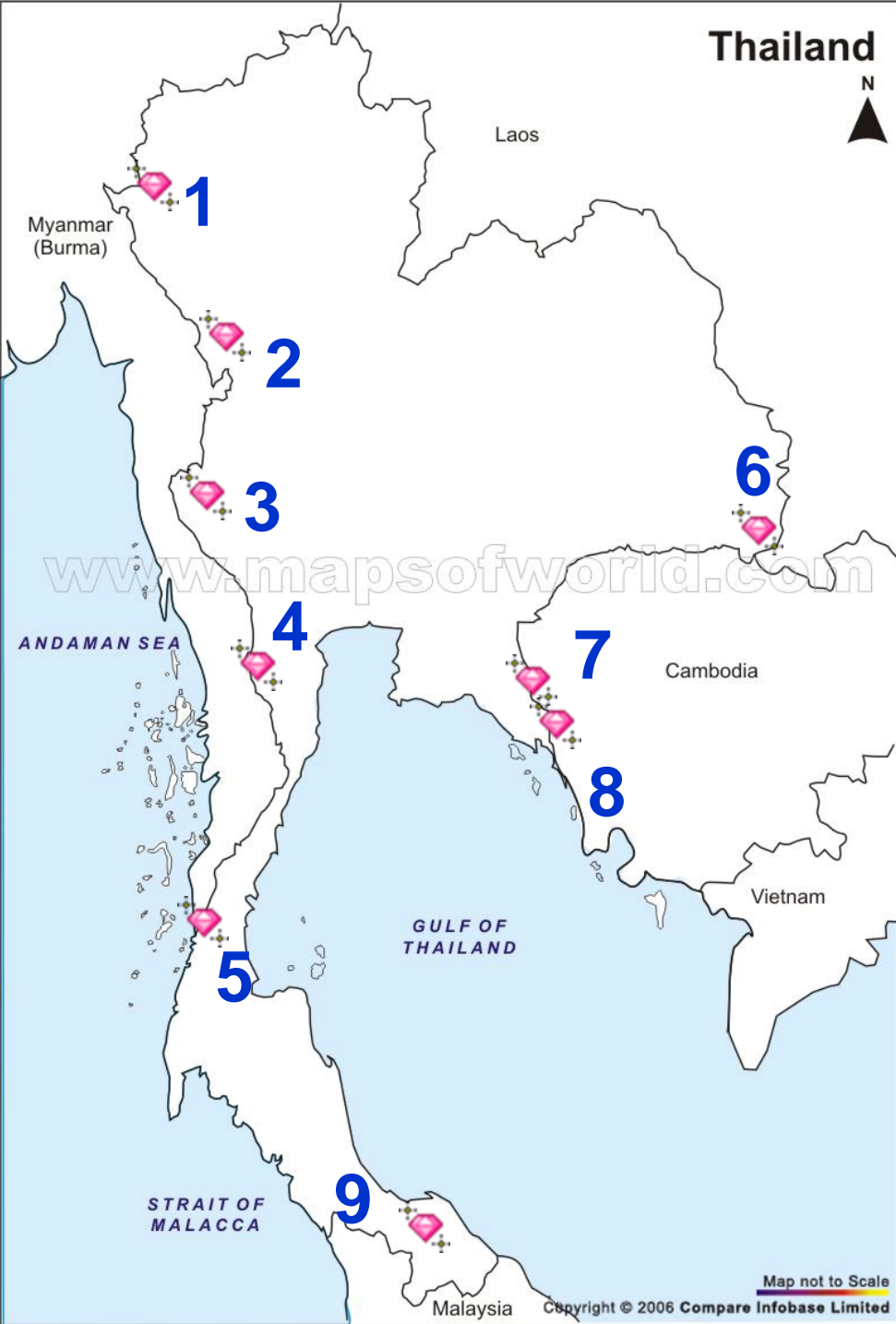
MR per







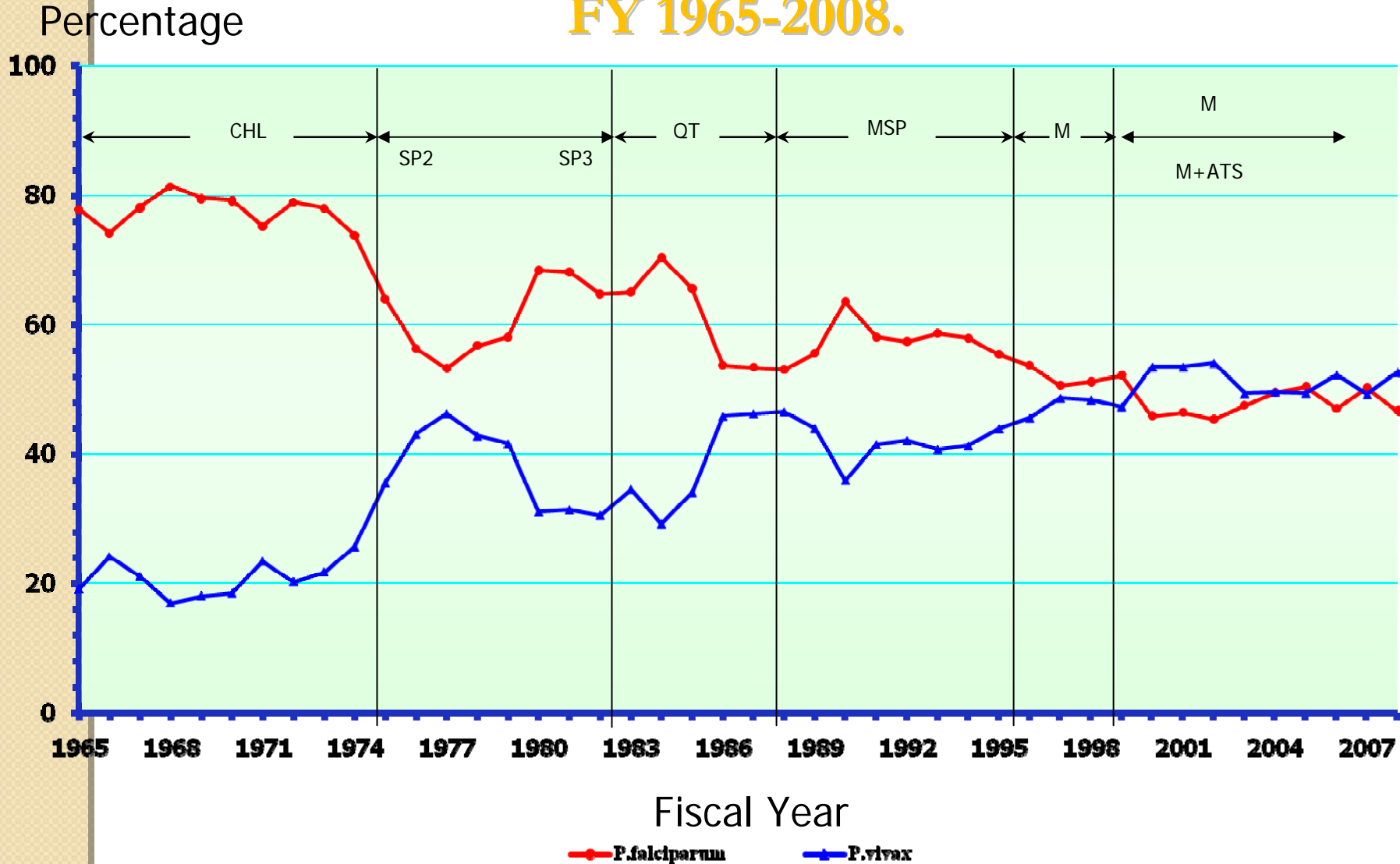
# Monitoring of Anti- malarial drug resistance in Thailand

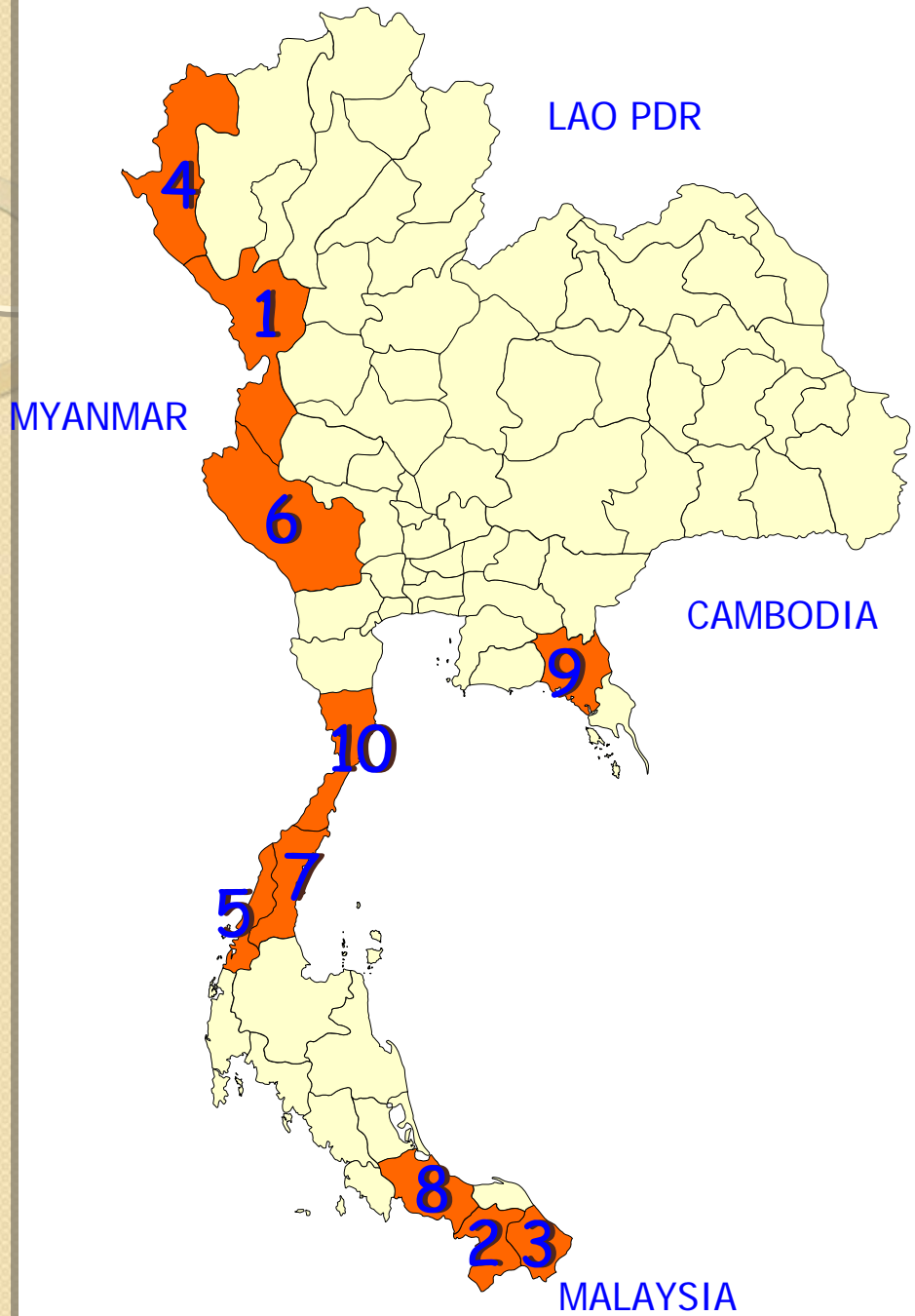
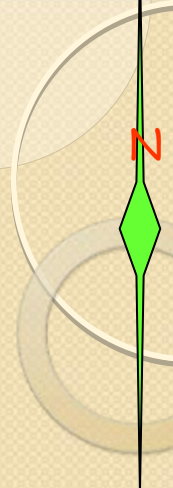


## Nine Provinces as sentinel sites for monitoring of drug resistance

1. Mae Hong Son
2. Tak
3. Kanchanaburi
4. Ratchaburi
5. Ranong
6. Ubon Ratchathania
7. Chanthaburi
8. Trat
9. Yala

# Proportion of malaria parasite species in relation to the National drug policy, Thailand, FY 1965-2008.

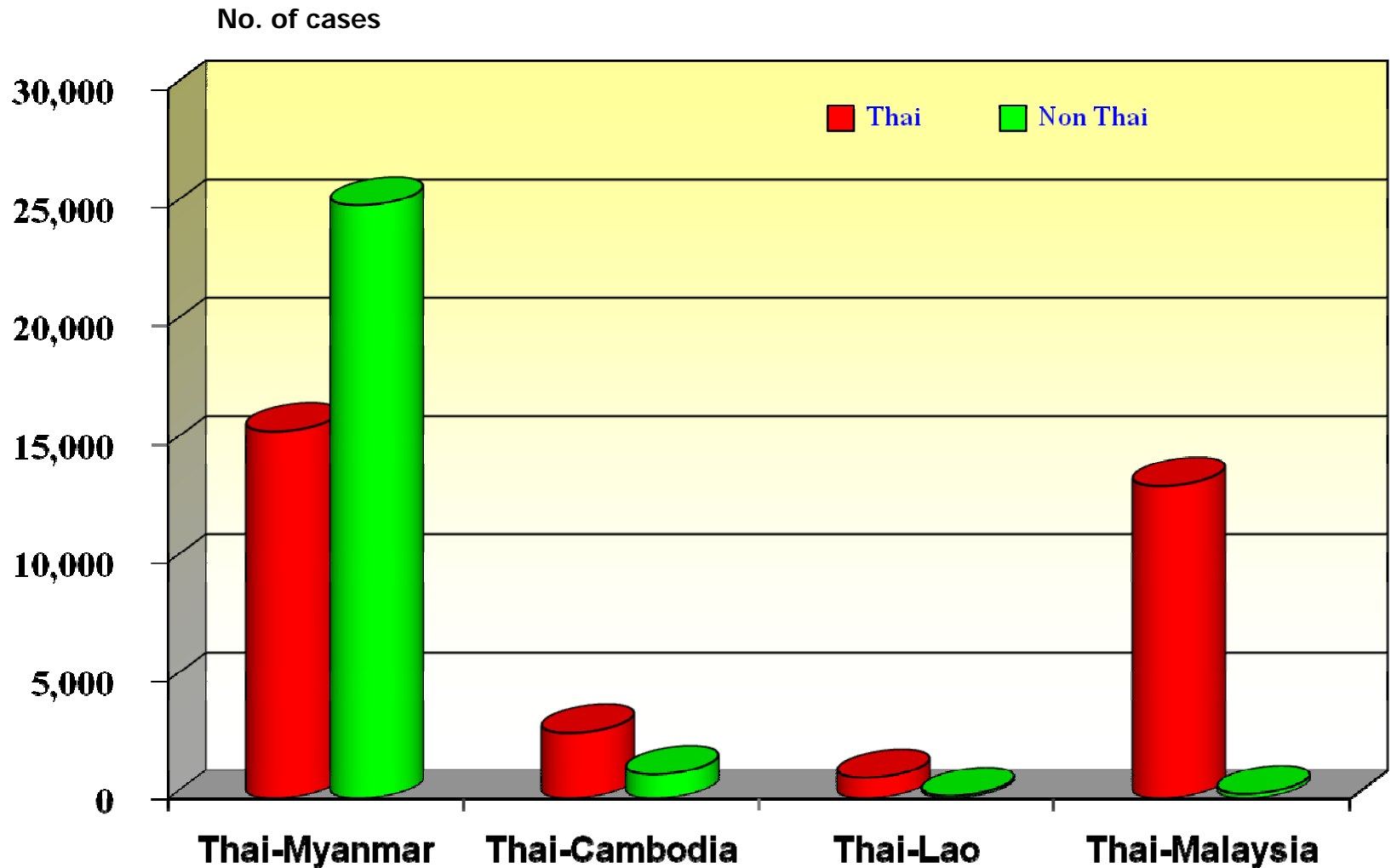




## Map showing Top Ten Provinces of Thailand with highest malaria cases, FY2008

1.	Tak	(5,386)
2.	Yala	(5,330)
3.	Narathiwat	(1,690)
4.	Mae Hong Son	(1,450)
5.	Ranong	(1,280)
6.	Kanchanaburi	(1,218)
7.	Chumporn	(1,167)
8.	Songkla	(1,047)
9.	Chanthaburi	(925)
10.	Prachuap Khiri Khan	(891)

# Number of Thai and Non-Thai cases by border site Fiscal Year 2008



# Constraints and key challenges on the Thai Malaria Control Programme

- Multi-drug resistant of *falciparum* malaria is one of the most severe challenges to malaria control in Thailand.
- Scaling up the malaria control measures and the effective interventions need to be done in all endemic villages focusing on both Thai and Non-Thai population (including migrants, registered and undocumented workers).
- Malaria burden in the unrest areas along the southern border provinces urgently need to be solved.
- Capacity building of local health personnel on malaria control program is needed when decentralization of the health care services has resulted in the progressive integration of specialized National Malaria Control Programme services.

# Containments of multi-drug resistance

- ✓ Case Management
- ✓ Private sector
- ✓ Vector control & personal protection
- ✓ Migrants
- ✓ Health Sector Strengthening
- ✓ M&E
- ✓ Resource Mobilization, Advocacy
- ✓ Geographical and demographic information
- ✓ Research

# National Drug Policy for *falciparum* malaria, January 2008 onward

Age (year)	1st		2nd		3rd	
	ATS (day)	M (day)	ATS (day)	M (day)	ATS (day)	P mg.
14+	4	3	4	2	4	30
8 -13	3	2	3	1 ½	2	15
3-7	2	1 1/2	2	1	2	10
1-2	1	3/4	1	½	1	5
6-11m	1	1/2	1	1/3	-	-
Refer children <6 m and pregnancy women to hospital						

ATS = 50 mg, M = 250 mg



# Containment of the constraints to malaria elimination

Malaria control strategies consist of:

- **(i) Surveillance:** Increasing the accessibility to health care system among Thai and Non Thai people.
- **(ii) Parasite control:** RDT will be used for malaria diagnosis in remote areas.
- **(iii) Vector control:** Increasing the coverage of LLN, ITN and mosquito net used among the ethnic minority and high risk groups.
- **(iv) Behavioral Change Communication (BCC) and appropriate IEC materials** in local languages will be distributed to population at risk.
- **(v) Strengthening of capacity building for health personnel at all level** (provincial, district and health center level).

# Success and Challenges of Malaria Control Programme

## Malaria Control and Cross Border Collaboration

- Malaria strategies along the border are emphasized on early diagnosis and prompt treatment in order to reduce disease morbidity and mortality and also using vector control measures to reduce malaria transmission among foreigners.
- Malaria detection and treatment will be undertaken among migrants prior to grant work permit.
- As the disease is borderless, strengthening of malaria control along the border and promotion of collaboration among organizations concerned have been also emphasized.
- Several border health meetings were conducted at different levels as a mechanism to strengthen information sharing and promote cross-border collaboration.

# Lesson learnt from Global Fund Project Round 2

- ✓ Strong infrastructure from the availability of 523 malaria clinics located in endemic areas including the 300 Malaria Posts under the Global Fund Malaria Project Round 2 increase the accessibility to health care system.
- ✓ Long lasting insecticide treated net (LLIN) was introduced into nine border provinces as targeted areas.
- ✓ The contribution of ITNs from the Global Fund Project to population in targeted areas revealed high coverage of population protected by ITNs with very well accepted in community.
- ✓ Standard IEC materials in local languages indicated that the target population were able to access appropriate materials as well as increased knowledge and skill of local health authority and its network in IEC material development.
- ✓ The Malaria Early Detection System have been considered to be an effective tool for early detection of malaria epidemics. Response to the disease outbreaks can be promptly and timely carried out by SRRT Team.



## **Malaria grant Round 7, Thailand**

- **Project Title:**

**Partnership towards malaria reduction in migrant and conflict-affected population in Thailand**

- **Goal**

**To reduce the malaria burden among the resident population and temporary migrants in endemic areas**

# Malaria grant Round 7, Thailand

## Project Objective & SDA

- To improve access to early diagnosis and treatment of malaria among vulnerable populations  
**SDA 1: Treatment: Diagnosis and prompt, effective anti-malarial treatment.**
- To improve access to effective malaria prevention measures among vulnerable populations.  
**SDA 2: Prevention: Insecticide-treated nets (ITNs)**
- To increase effective utilization of impregnated bednets and prompt treatment seeking behaviors amongst fever cases  
**SDA 3: BCC - community outreach**

# Malaria grant Round 7, Thailand

## Project Objective & SDA

- **To improve the overall functionality of malaria control among vulnerable populations**
  - SDA 4: Supportive environment: Coordination and partnership development**
  - SDA 5: HSS: Community systems strengthening**
  - SDA 6: Supportive environment: Monitoring drug resistance**
  - SDA 7: Supportive environment: Technical monitoring and quality assurance**
  - SDA 8: HSS: Information system and M&E**
  - SDA 9: HSS: Service delivery**

# **Malaria grant Round 7, Thailand**

## **Performance Framework Year 1-2**

### **Impact**

- 1. Annual Parasite Incidence (malaria cases per 1,000 pop.**
- 2. Slide positivity rate among foreigners who reside in Thailand less than 6 months.**

### **Outcome Indicators**

- 1. % of households owning at least one ITN.**
- 2. Proportion of M1 migrant and Thai who slept under an ITN the previous night.**
- 3. Proportion of malaria patients living in endemic area with fever who have received antimalaria treatment according to national policy within 24 hrs of onset of fever.**

# **Malaria grant Round 7, Thailand**

## **Target populations**

**This proposal targets two specific population groups that correspond to these areas where malaria persists, these are: migrant workers and their families working in Thailand's western and eastern border regions, and the Thai communities that host them, and communities living in conflict zones in Thailand's southern provinces.**

**Area Implementation: 43 Provinces**



# **Malaria grant Round 7, Thailand**

## **Performance Framework Year 1-2**

### **Output Indicators**

- 1/1.1 Number of village malaria posts providing malaria diagnosis and treatment established in A1 (high transmission area) areas**
- 1/1.2 Number of confirmed uncomplicated Plasmodium falciparum malaria cases among Thai, M1 (registered migrants) and M2 (unregistered migrants) migrants receiving antimalarial treatment (ACT and non-ACT)**
- 1/1.3 Number of Thai, M1 and M2 migrants with fever who are tested for malaria (with microscopy or RDT)**
- 2/2.1 Number of LLINs distributed to Thai and M1 migrants**
- 2/2.2 Number of LLINs distributed to M2 migrants**
- 2/2.3 Number of existing ITNs re-impregnated**

# **Malaria grant Round 7, Thailand**

## **Performance Framework Year 1-2**

### **Output Indicators**

- 3/3.1**    **Number of target population reached by IEC/BCC activities**
- 3/3.2**    **Number of people reached through home visit by health volunteers**
- 4/4.1**    **Number of functional sentinel sites for monitoring antimalarial drug resistance performing studies according to WHO guidelines**



*Thank you*