Overview

Malaria at a Glance
- Reported cases of malaria: 31,771 (43% P. vivax)
- Deaths from malaria: 70
- Population at risk (%): 50 (Total population: 68.1 million)
- Annual parasite index: 0.4 (cases/1,000 total population/year)
- Slide positivity rate (%): 1.7

Health and Economic Indicators
- GNI per capita (US$): 4,210
- Country income level: Upper middle
- Annual per capita health expenditure (US$): 168
- Total health expenditure as % of GDP: 4
- Private health expenditure as % of total health expenditure: 24
- Life expectancy (years): 69

Source: WHO, World Malaria Report 2010

Human Population Density

Strategic Program Goals for Elimination
- Eighty percent of Thailand will be malaria free by 2020
- To reduce malaria in the population at-risk by 50% between 2008 and 2012
- To reduce morbidity and mortality rates by 50% between 2008 and 2012

Source: World Bank, World Development Indicators
Malaria Transmission Limits

Plasmodium falciparum

Plasmodium vivax

P. falciparum/P. vivax malaria risk is classified into no risk, unstable risk of <0.1 case per 1,000 population (API) and stable risk of ≥0.1 case per 1,000 population (API). Risk was defined using health management information system data and the transmission limits were further refined using temperature and aridity data. Data from the international travel and health guidelines (ITHG) were used to identify zero risk in certain cities, islands and other administrative areas.

Reported Malaria Cases

Source: WHO, World Malaria Report 2010
Occurrence of Malaria Vector Species

1. Dirus Complex

2. Minimus Complex

3. Maculatus Group

4. Sundaicus Complex

Probability of occurrence scale:

These maps show the predicted probability of occurrence of each vector species.
**Bionomics Vector Species Table**

<table>
<thead>
<tr>
<th>Species</th>
<th>Vector status across species range</th>
<th>Primary environment</th>
<th>Zoophilic/anthropophilic</th>
<th>Endo/exophagic</th>
<th>Endo/exophagic</th>
<th>Biting time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anopheles (Cellia) dirus species complex</td>
<td>Includes highly competent vector species</td>
<td>Forested mountains and foothills, cultivated forests, plantations and forest fringes</td>
<td>Anthropophilic</td>
<td>Both</td>
<td>Exophilic</td>
<td>Night</td>
</tr>
<tr>
<td>Anopheles (Cellia) minimus species complex</td>
<td>Important malaria vectors</td>
<td>Forested hills, agricultural fields including traditional rice agro-ecosystems, 200–900m</td>
<td>Both</td>
<td>Both</td>
<td>Both</td>
<td>Dusk/night</td>
</tr>
<tr>
<td>Anopheles (Cellia) maculatus Group</td>
<td>Variable depending on species and location</td>
<td>Hilly and mountainous areas, permanent or semi-permanent clean water bodies of sunlit water</td>
<td>Zoophilic/both</td>
<td>Both</td>
<td>Exophilic</td>
<td>Dusk/night</td>
</tr>
<tr>
<td>Anopheles (Cellia) sundialicus species complex</td>
<td>Variable depending on location</td>
<td>Open mangrove and coastal shrimp or fish ponds, inland seawater canals</td>
<td>Anthropophilic/both</td>
<td>Both</td>
<td>Both</td>
<td>Night</td>
</tr>
<tr>
<td>Anopheles (Cellia) acutus Dörritz, 1902</td>
<td>Variable depending on location and abundance</td>
<td>Coastal plain and upland rice fields</td>
<td>Zoophilic</td>
<td>Both</td>
<td>Exophilic/both</td>
<td>Dusk/night</td>
</tr>
<tr>
<td>Anopheles (Anopheles) sinensis species complex</td>
<td>Secondary vector in Thailand</td>
<td>Lowland freshwater habitats with vegetation in open areas</td>
<td>Zoophilic</td>
<td>Exophagic</td>
<td>Exophilic</td>
<td>Dusk/night</td>
</tr>
<tr>
<td>Anopheles (Cellia) subpictus species complex</td>
<td>Variable depending on species and location</td>
<td>Coastal brackish water, riverine pools and rice fields</td>
<td>Zoophilic</td>
<td>Both</td>
<td>Endophilic</td>
<td>Dusk/night</td>
</tr>
<tr>
<td>Anopheles (Cellia) annulatus van der Wulp, 1884; Anopheles (Anopheles) barbirostris species complex; Anopheles (Cellia) culicifacies species complex; Anopheles (Cellia) leucophyrus and Anopheles (Cellia) latens</td>
<td>Present but not or minor vector in Thailand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*ATLAS OF THE ASIA PACIFIC MALARIA ELIMINATION NETWORK*
Sources

Sources for the Maps in the Atlas of the Asia Pacific Malaria Elimination Network, 2011


Sources for Thailand

Strategic Program Goals for Elimination


Transmission Limits Maps (Data years 2007–2010)


The Sources listed above are extracted from the following pages in the Atlas of the Asia Pacific Malaria Elimination Network, 2011

Methods and Sources (12)

Appendix A: Sources and Citations for the Strategic Program Goals for Elimination (59–60)

Appendix B: Annual Parasite Incidence Data Used for the Transmission Limits Maps (61)