

# Democratic People's Republic of Korea COUNTRY PROFILE

## Overview of malaria control activities and programme progress

Malaria had been eradicated from the Democratic People's Republic of Korea by the beginning of the 1970s, but it re-emerged in 1997–1998 with an initial report of approximately 2000 cases in the southern provinces. Since then the situation has worsened. About 10 million people in seven provinces are at risk of malaria, the majority living near the border with the Republic of Korea. *P. vivax* is identified as the only malaria species and has a short transmission season, from June to September. The primary confirmed vector responsible for malaria transmission is *A. sinensis*.

In 1998, the country reported about 2000 cases with estimates as high as 25 000 malaria cases. Thereafter, the incidence increased markedly to a high of 296 540 reported cases in 2001. As a result of interventions, there has been a significant decline to 241 190 reported cases in 2002 and 46 251 in 2003.

WHO technical support for malaria emphasizes early diagnosis, prompt and effective treatment, mass chemoprophylaxis with 14-day PQ, use of ITNs and selective use of indoor residual spraying with a pyrethroid insecticide in high risk areas. Following the WHO recommendation, mass chemoprophylaxis was implemented before malaria transmission in 2002 and continued in 2003 and 2004, contributing to the reduction in the reported malaria cases. However, it is very clear that the effect of mass chemoprophylaxis with PQ in an attempt to eliminate malaria epidemics is limited if other malaria prevention and control measures such as vector control, personal protection and health education are not adequately incorporated.

The main problems and constraints that the NMCP faces are shortage of most resources including funds, antimalarial drugs, laboratory equipment and supplies, insecticides, ITNs and trained personnel.

### National malaria policy and strategy environment

#### National malaria strategy overview for 2003

	Strategy
<b>Treatment and Diagnosis Guidelines</b> Published/updated in	Yes
<b>Monitoring antimalarial drug resistance</b> Number of sites currently active	Yes 2
<b>Home management of malaria</b>	NA
<b>Vector control using insecticides</b>	Yes
<b>Monitoring insecticide resistance</b> Number of sites currently active	0
<b>Insecticide-treated mosquito nets (ITNs)</b>	Yes
<b>Intermittent preventive treatment (IPT)</b>	NA
<b>Epidemic preparedness</b>	Yes

#### Current antimalarial drug policy

	Current policy
<b>Uncomplicated malaria</b>	
<i>P. falciparum</i> (unconfirmed)	
<i>P. falciparum</i> (lab confirmed)	
<i>P. vivax</i>	CQ+PQ
<b>Treatment failure</b>	
<b>Severe malaria</b>	
<b>Pregnancy</b>	
Prevention	
Treatment	

## EPIDEMIOLOGICAL DATA

Following WHO recommendations, malaria case reporting is carried out in most countries. The data presented below reflect aggregated malaria cases at the national level and are presented by gender, age and subnational level as submitted to WHO. Malaria reporting from national surveillance systems varies in quality and reporting completeness and may have limited value in understanding the actual malaria burden, but may be useful for understanding trends in the relative burden of malaria in the public health sector.

### Reported malaria cases (annual)

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
								1 085	7 980
2000	2001	2002	2003	Date of last report: 1 October 2004					
73 742	115 615	98 852	16 538						

### Reported malaria by type and quality

For most recent year

Reported malaria cases	16 538
Reported malaria deaths	0

#### Probable or clinically diagnosed

Malaria cases	46 251
Severe (inpatient or hospitalized) cases	0
Malaria deaths	0
Slides taken	32 083
Rapid diagnostic tests (RDTs) taken	

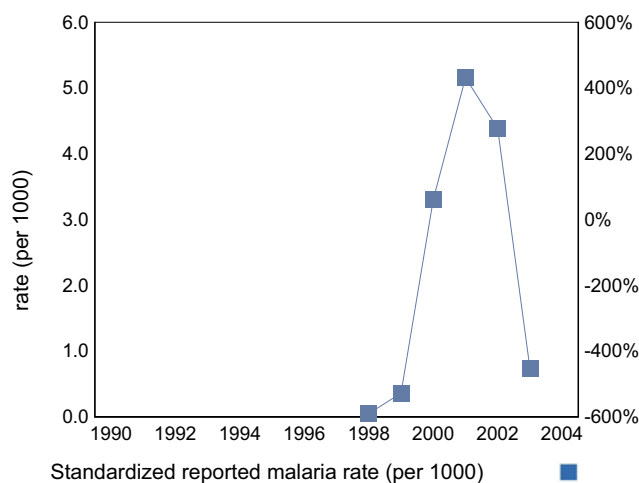
#### Laboratory confirmed

Malaria cases	16 538
<i>P. falciparum</i> or mixed	0
<i>P. vivax</i>	16 538
Severe (inpatient or hospitalized) cases	0
Malaria deaths	0

#### Investigations

Imported cases

Estimated reporting completeness (%)



### Reported malaria cases by age and gender

Group	Subgroup	2000	2001	2002	2003	%
	Total	73 742	115 615	98 852	16 538	100
Gender	Male	126 745				172
	Female	77 683				105
Age	PW				92	1
	1-4 years	126				0
	<5 years				962	6
	5-9 years				1 954	12
	10-14 years				3 164	19
	15+ years				40 171	243
	15-19 years	41 593				56
>19 years	162 709				221	

### Reported malaria cases by selected subnational area

8 areas	2000	2001	2002	2003	%
SOUTH PYONGAN				4 615	28
NORTH HWANGHAE				2 857	17
SOUTH HWANGHAE				2 653	16
NORTH PYONGAN				2 458	15
KANGWON				1 965	12
SOUTH HAMGYONG				936	6
NORTH HAMGYONG				733	4
PYONGYANG				321	2

## COVERAGE OF ROLL BACK MALARIA INTERVENTIONS

Information related to the coverage of RBM key interventions is presented here. This includes coverage of antimalarial treatment, possession and use of insecticide-treated nets (ITNs), and use of intermittent preventive treatment (IPT) among pregnant women (PW) where national policy indicates.

### Insecticide-treated nets

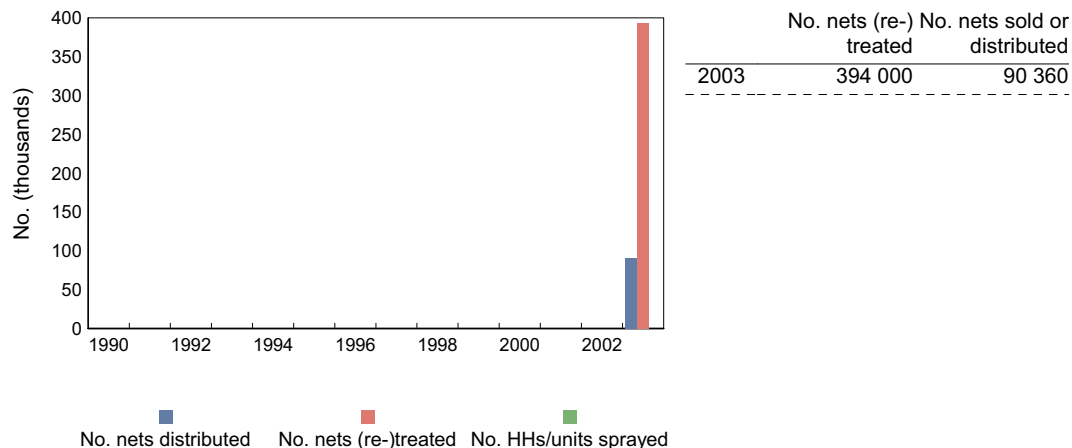
ITNs are one of the key interventions promoted by RBM. Coverage of ITNs is best assessed through household (HH) surveys which ask questions on possession and use of nets, as well as insecticide treatment status, among the target populations of children under 5 years of age (U5) and pregnant women. Data below represent available household survey results in which household possession and use of nets and ITNs have been assessed.

*No survey-based estimates of mosquito net or ITN coverage are currently available.*

## SERVICE DELIVERY AND MALARIA-RELATED COMMODITIES

### General malaria-related services delivered

Services delivered for malaria control include numbers of nets and insecticides delivered or sold, numbers of nets (re-)treated with insecticide and numbers of households (HHs)/units sprayed during IRS campaigns. These services and service-related commodities mostly reflect core malaria control activities of national malaria control programmes. The information reflects annual, country-reported data.



## MONITORING ANTIMALARIAL DRUG EFFICACY

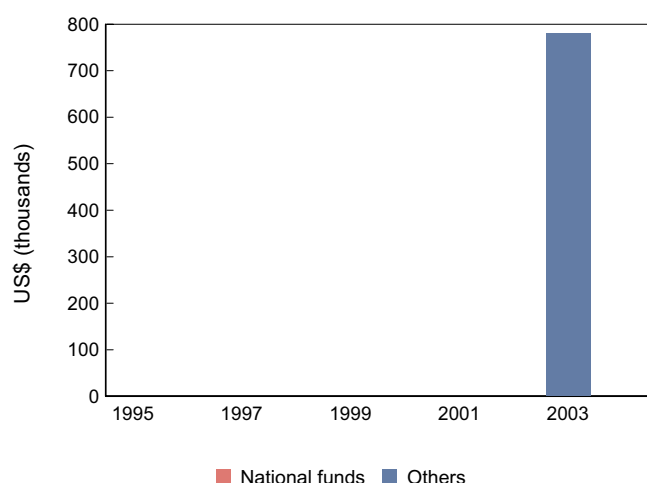
Monitoring antimalarial drug efficacy is important for understanding the impact of antimalarial treatment being delivered and the need for drug policy change, essential for ensuring prompt access to effective treatment. Median, range and quartiles are based on percentage clinical failure for uncomplicated *P. falciparum* malaria for countries in Africa south of the Sahara, and percentage total failure for all other areas. Included are studies that used WHO protocol among selected drugs.

*No studies on the efficacy of antimalarial drugs are currently available or there is no reported P. falciparum transmission.*

## FINANCING FOR MALARIA

### Annual funding for malaria control

This information represents country-reported national and other resources budgeted or spent for national malaria control programme efforts. If information was reported in a different currency than US\$, the annual average of the official exchange rate from the World Development Index was used for conversion. Currency is presented in US\$ (thousands).



	National funds	Others
1995	-	-
1996	-	-
1997	-	-
1998	-	-
1999	-	-
2000	-	-
2001	-	-
2002	-	-
2003	-	780
2004	-	-

### Malaria funds from the Global Fund to Fight HIV, Tuberculosis, and Malaria

Information on additional resources provided to countries through GFATM from 2-year committed funds for malaria from successful proposals through the first four rounds is presented. The details on approved proposals, grant agreements and disbursements to date are provided. Figures are presented in US\$. These data are maintained and updated by GFATM.

Approved proposals			Grant agreements and disbursements (as of 13 January 2005)						
Source	Round	Total year 1-2 budgets	Principal recipient	Signed	Signature date	Grant amount	No. of disbursements	Total disbursed	% disbursed
CCM	3	3 227 300		No			-		

### General notes and remarks

See explanatory notes at the beginning of the section.