COUNTRY PROFILE

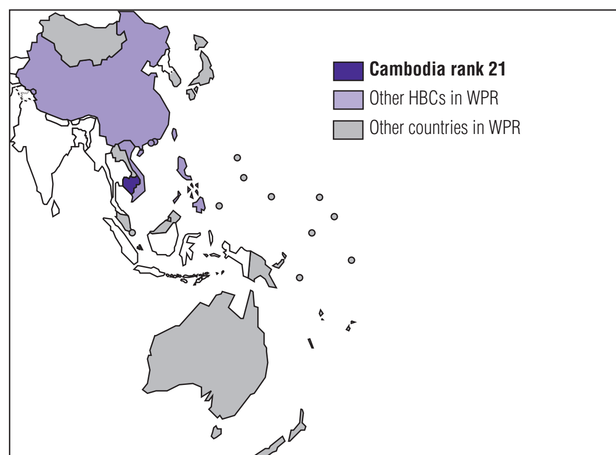
Cambodia

Cambodia has reported high treatment success rates for the last decade. In 2006, notifications of new cases fell for the first time since 1995. It is not yet possible to say whether this is a result of declining incidence or an indication of problems with case-finding. The use of community members to refer suspects for diagnosis and to supervise treatment, and collaboration with the private sector, are likely to improve case-finding. Collaborative TB/HIV activities are being introduced in more districts each year as collaboration between the NTP and national AIDS control programme improves. The treatment of MDR-TB has begun on a small scale; in order to treat more patients the NTP will need to ensure that culture and DST are available and of high quality. The budget for TB control has changed little since 2004, but funding has decreased, resulting in large gaps for 2006–2008.

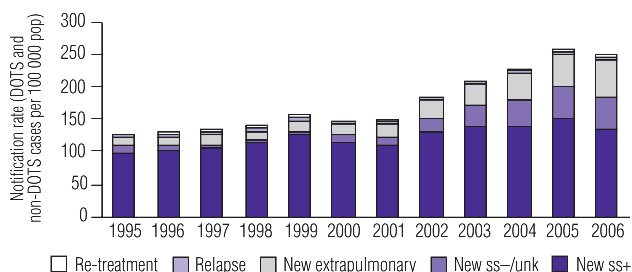
SURVEILLANCE AND EPIDEMIOLOGY, 2006

Population (thousands)[a]	14 197
Estimates of epidemiological burden[1]	
Incidence (all cases/100 000 pop/yr)	500
Trend in incidence rate (%/yr, 2005–2006)[2]	**-1.0**
Incidence (ss+/100 000 pop/yr)	220
Prevalence (all cases/100 000 pop)[2]	**665**
Mortality (deaths/100 000 pop/yr)[2]	**92**
Of new TB cases, % HIV+[b]	9.6
Of new TB cases, % MDR-TB (2005)[c]	0.0
Of previously treated TB cases, % MDR-TB (2005)[c]	3.1
Surveillance and DOTS implementation	
Notification rate (new and relapse/100 000 pop/yr)	244
Notification rate (new ss+/100 000 pop/yr)	136
DOTS case detection rate (new ss+, %)	**62**
DOTS treatment success (new ss+ cases, 2005 cohort, %)	**93**
Of new pulmonary cases notified under DOTS, % ss+	74
Of new cases notified under DOTS, % extrapulmonary	23
Of new ss+ cases notified under DOTS, % in women	49
Of sub-national reports expected, % received at next reporting level[d]	100
Laboratory services[3]	
Number of laboratories performing smear microscopy	186
Number of laboratories performing culture	3
Number of laboratories performing DST	1
Of laboratories performing smear microscopy, % covered by EQA	100
Management of MDR-TB	
Of new cases notified, % receiving DST at start of treatment	0.0
Of new cases receiving DST at start of treatment, % MDR-TB	–
Of re-treatment cases notified, % receiving DST	0.0
Of re-treatment cases receiving DST, % MDR-TB	–
Collaborative TB/HIV activities	
National policy of counselling and testing TB patients for HIV?	Yes (to all patients)
National surveillance system for HIV-infection in TB patients?	Yes
Of TB patients (new and re-treatment) notified, % tested for HIV	10
Of TB patients tested for HIV, % HIV+	9.6
Of HIV+ TB patients detected, % receiving CPT	70
Of HIV+ TB patients detected, % receiving ART	35

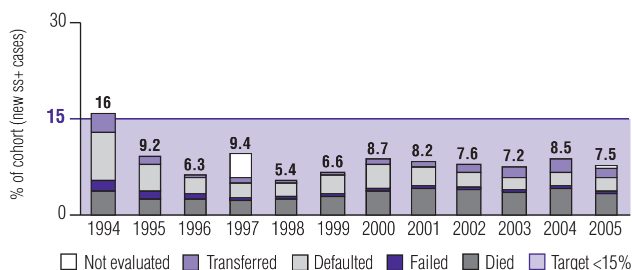
WHO Western Pacific Region (WPR)
Rank based on estimated number of incident cases (all forms) in 2006



Case notifications
Decline of about 10% in ss+ notification rate compared with 2005, while extrapulmonary notification rate increased by 10%



Unfavourable treatment outcomes, DOTS
Treatment success rates have been consistently high for more than 10 years



DOTS expansion and enhancement	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DOTS coverage (%)	60	80	88	100	100	99	100	100	100	100	100	100
DOTS notification rate (new and relapse/100 000 pop)	128	102	130	138	154	148	147	186	209	225	255	244
DOTS notification rate (new ss+/100 000 pop)	97	83	106	113	126	116	110	130	140	138	150	136
DOTS case detection rate (all new cases, %)	22	18	23	24	28	27	27	35	40	43	49	48
DOTS case detection rate (new ss+, %)	40	34	45	48	54	50	48	57	62	62	68	62
Case detection rate within DOTS areas (new ss+, %)[e]	67	43	51	48	54	51	48	57	62	62	68	62
DOTS treatment success (new ss+, %)	91	94	91	95	93	91	92	92	93	91	93	–
DOTS re-treatment success (ss+, %)	85	89	90	91	90	90	92	89	87	86	81	–

IMPLEMENTING THE STOP TB STRATEGY[1]

DOTS EXPANSION AND ENHANCEMENT

Political commitment, standardized treatment, and monitoring and evaluation system

Achievements

- Developed policy documents and 5-year plan
- Completed external programme review in 2006
- Conducted training and organized supervision to support the progressive decentralization of TB control activities to the operational district level
- Produced 13th annual report of activities of NTP

Planned activities

- Hold quarterly monitoring and evaluation workshops with provincial and operational district stakeholders to analyse and evaluate programme performance

Quality-assured bacteriology

Achievements

- Established DST capacity required for 2nd DRS
- Decentralized (quarterly-based) EQA to provincial level
- Improved quality of supervision by developing standardized checklist for laboratory activities
- Trained at least one member of staff from each of the 186 microscopy units in AFB microscopy, trained staff from all 3 culture units in culture, and trained NRL staff in DST

Planned activities

- Improve quality of smear preparation in health centres and community DOTS services
- Continue expansion of quarterly-based EQA at provincial level
- Revise laboratory guidelines and training modules
- Improve quality of DST

Drug supply and management system

Achievements

- Improved capacity for forecasting and procurement of first-line drugs

Planned activities

- Apply to GDF for paediatric formulations
- Develop national procurement system for anti-TB drugs through GDF prequalified manufacturers
- Train central-level staff to manage second-line anti-TB drugs, which are not currently available through the NTP

TB/HIV, MDR-TB AND OTHER CHALLENGES

Collaborative TB/HIV activities

Achievements

- Trained staff in 28 out of 77 operational districts in collaborative TB/HIV activities and strengthened supervision of those activities
- Organized meetings with stakeholders in the area of HIV to improve referral of HIV patients for diagnosis and treatment of TB

Planned activities

- Train staff on collaborative TB/HIV activities in remaining operational districts and conduct refresher TB/HIV training in operational districts where staff have already been trained
- Strengthen supervision in TB/HIV sites and organize a national TB/HIV workshop

Diagnosis and treatment of multidrug-resistant TB

Achievements

- Received GLC approval to launch small-scale project to detect and treat MDR-TB in clinical trial setting

Planned activities

- Develop an MDR-TB working group, chaired by CENAT (NTP)
- Subject to Global Fund round 7 application approval, apply to GLC for approval of MDR-TB component
- Increase culture capacity of laboratory network; introduction of liquid culture planned for mid 2008

High-risk groups and special situations

Achievements

- Intensified case-finding in prisons in Phnom Penh
- Implemented, in collaboration with the NGO, “Vor Ort” projects aimed at increasing TB awareness and case-finding in ethnic minorities in Rattanakiri Province

Planned activities

- Conduct national assessment of TB in prisons and implement pilot interventions in 3 prisons in 2008 with TBCAP funding

HEALTH SYSTEM STRENGTHENING, INCLUDING HUMAN RESOURCE DEVELOPMENT

Achievements

- Planning for TB control involved cross-sectoral and intersectoral collaboration
- Aligned NTP budget and plan with poverty reduction strategy paper and SWAp

Planned activities

- Align national strategic plan for TB laboratories with national policy on laboratories
- Implement activities listed in Global Fund round 5 plan: contribute to Strategic Health Plan 2008–2010, participate in development of peer review procedures, assess implementation of key operational planning and monitoring and evaluation processes, and strengthen management of procurement and distribution systems

[1] Unless otherwise specified, achievements are for financial year 2006; planned activities are for financial year 2007.

ENGAGING ALL CARE PROVIDERS

Achievements

- Successfully implemented PPM pilot projects with private practitioners and pharmacies in collaboration with a number of NGOs in 5 out of 24 provinces in 2006 (11 provinces in 2007)

Planned activities

- Translate and adapt ISTC to Khmer
- Draft PPM operational guidelines
- Organize annual workshop to review achievements and challenges of PPM pilot projects

EMPOWERING PEOPLE WITH TB, AND COMMUNITIES

Advocacy, communication and social mobilization

Achievements

- Organized World TB Day activities at central, provincial and operational district levels
- Distributed TB leaflets at health centres

Planned activities

- Organize World TB Day celebrations at central, provincial and operational district levels
- Organize education activities in schools and communities
- Publish information leaflets for health centre staff

Community participation in TB care

Achievements

- Community members (generally volunteers) supervised treatment of patients living far from health centres, and referred suspects and contacts for diagnosis in 379 out of 947 health centres (located in 28 operational districts); volunteers receive one day of training, and meet monthly at health centres

Planned activities

- Organize refresher training for community volunteers, to increase case detection, referral and contact investigation
- Expand use of community volunteers to over half of health centres, with Global Fund support for training

Patients' Charter

Achievements

The Patients' Charter was published in 2006 and was therefore not available for use in countries until then.

Planned activities

- Translate and adapt the Patients' Charter to Khmer

RESEARCH, INCLUDING SPECIAL SURVEYS AND IMPACT MEASUREMENT

Achievements

- Conducted national DRS (protocol designed, samples collected; results will be available in August 2008)

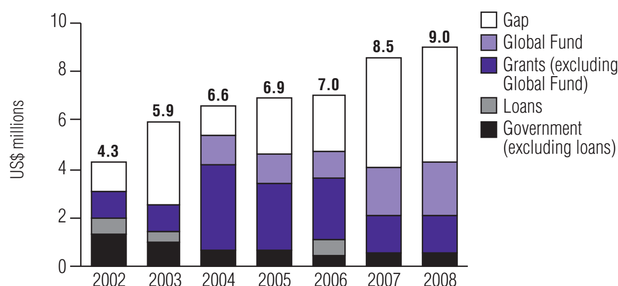
Planned activities

- Conduct 3rd national survey of HIV seroprevalence among TB patients
- Conduct operational research on TB diagnosis (X-ray and sputum smear preparation)

FINANCING THE STOP TB STRATEGY

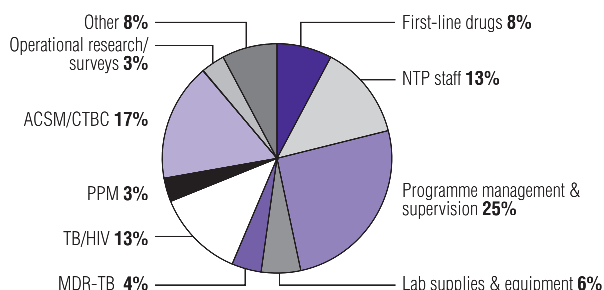
NTP budget by source of funding

Budget increased in 2007 and 2008 compared with previous years; increased funding from Global Fund in 2007–2008, but increasing funding gaps



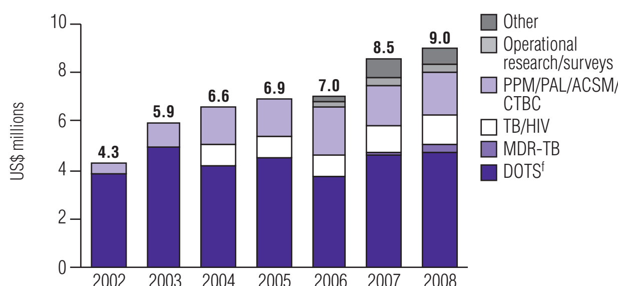
NTP budget by line item, 2008

DOTS (52%) and ACSM/CTBC (17%) account for the largest share of the NTP budget



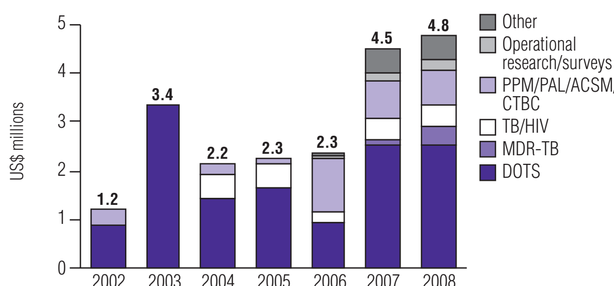
NTP budget by line item

Increased budget for ACSM/CTBC, collaborative TB/HIV activities and operational research since 2006; new funding needs for MDR-TB in 2008



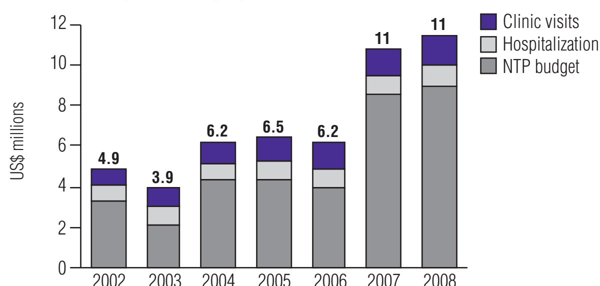
NTP funding gap by line item

Large funding gaps since 2006 for ACSM; funding gap within DOTS component mainly for routine programme management and supervision activities



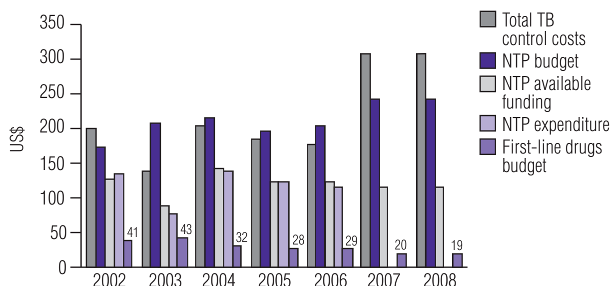
Total TB control costs by line item[4]

Hospitalization costs are for 1200 dedicated TB beds, costs for clinic visits cover an estimated 64 outpatient visits per patient during treatment



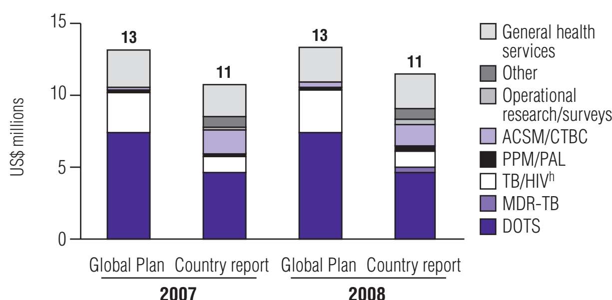
Per patient costs, budgets and expenditures[5]

Increasing cost per patient, but stable budget and available funding per patient



Comparison of country report and Global Plan:[g] total TB control costs, 2007–2008

Global Plan costs for DOTS higher than country plan cost for DOTS due to higher estimated number of ss–/extrapulmonary patients to be treated; country plan for MDR-TB ahead of the expectations of Global Plan



NTP budget and funding gap by Stop TB Strategy component

(US$ millions)	2007 BUDGET	2007 GAP	2008 BUDGET	2008 GAP
DOTS expansion and enhancement	4.6	2.5	4.7	2.5
TB/HIV, MDR-TB and other challenges	1.2	0.5	1.5	0.8
Health system strengthening	0	0	0	0
Engage all care providers	0.2	0.1	0.3	0.2
People with TB, and communities	1.5	0.6	1.5	0.5
Research	0.3	0.2	0.3	0.2
Other	0.7	0.5	0.7	0.5

Financial indicators for TB

	2007	2008
Government contribution to NTP budget (including loans)	7.2%	6.8%
Government contribution to total cost TB control (including loans)	27%	26%
NTP budget funded	47%	47%
Per capita health financial indicators (US$)		
NTP budget per capita	0.6	0.6
Total costs for TB control per capita	0.7	0.8
Funding gap per capita	0.3	0.3
Government health expenditure per capita (2004)	6.1	
Total health expenditure per capita (2004)	24	

SOURCES, METHODS AND ABBREVIATIONS

a–h Please see footnotes page 169.

1 Incidence, prevalence and mortality estimates include patients infected with HIV. Estimate of TB burden reassessed following national prevalence survey in 2002. Incidence assumed to be declining at 1% per year as in other countries in Western Pacific Region.

2 MDG and STB Partnership indicators shown in bold. Targets are 70% case detection of smear-positive cases under DOTS, 85% treatment success, to ensure that the incidence rate is falling by 2015, and to reduce incidence rates and halve 1990 prevalence and mortality rates by 2015. Estimates for 1990 are prevalence 915/100 000 pop and mortality 119/100 000 pop/yr.

3 For routine diagnosis, there should be at least one laboratory providing smear microscopy per 100 000 population. To provide culture for diagnosis of paediatric, extrapulmonary and ss-/HIV+ TB, as well as DST for re-treatment and failure cases, most countries will need one culture facility per 5 million population and one DST facility per 10 million population.

4 Total TB control costs for 2002–2006 are based on expenditure, whereas those for 2007–2008 are based on budgets. Estimates of the costs of clinic visits and hospitalization are WHO estimates based on data provided by the NTP and from other sources. See Methods for further details.

5 NTP available funding for 2004–2006 is based on the amount of funding actually received, using retrospective data; available funding for 2002–2003 and 2007–2008 is based on prospectively reported budget data, and estimated as the total budget minus any reported funding gap.

– indicates not available; pop, population; ss+, sputum smear-positive; ss–, sputum smear-negative pulmonary; unk, pulmonary – sputum smear not done or result unknown; yr, year.