

## COUNTRY PROFILE

# Indonesia

The case detection rate in Indonesia exceeded 70% for the first time in 2006; collaboration with private health-care providers and non-NTP public providers, in conjunction with community-based TB care, has probably contributed to the increase in case-finding. Treatment outcomes were reported for nearly all new smear-positive patients registered in 2005, with the highest treatment success rate yet reported by Indonesia. As more providers participate in TB care, the NTP will need to work to ensure that treatment outcomes continue to be reported for all patients. The treatment of MDR-TB patients has begun and is included in the fully funded budget for 2007–2008.

### SURVEILLANCE AND EPIDEMIOLOGY, 2006

**Population** (thousands)<sup>a</sup> 228 864

#### Estimates of epidemiological burden<sup>1</sup>

Incidence (all cases/100 000 pop/yr)	234
Trend in incidence rate (%/yr, 2005–2006) <sup>2</sup>	-2.4
Incidence (ss+/100 000 pop/yr)	105
Prevalence (all cases/100 000 pop) <sup>2</sup>	253
Mortality (deaths/100 000 pop/yr) <sup>2</sup>	38
Of new TB cases, % HIV+ <sup>b</sup>	0.6
Of new TB cases, % MDR-TB (2004) <sup>c</sup>	2.0
Of previously treated TB cases, % MDR-TB <sup>c</sup>	19

#### Surveillance and DOTS implementation

Notification rate (new and relapse/100 000 pop/yr)	121
Notification rate (new ss+/100 000 pop/yr)	77
DOTS case detection rate (new ss+, %)	73
DOTS treatment success (new ss+, 2005 cohort, %)	91
Of new pulmonary cases notified under DOTS, % ss+	66
Of new cases notified under DOTS, % extrapulmonary	2.6
Of new ss+ cases notified under DOTS, % in women	41
Of sub-national reports expected, % received at next reporting level <sup>d</sup>	98

#### Laboratory services<sup>3</sup>

Number of laboratories performing smear microscopy	4 855
Number of laboratories performing culture	41
Number of laboratories performing DST	11
Of laboratories performing smear microscopy, % covered by EQA	100

#### Management of MDR-TB

Of new cases notified, % receiving DST at start of treatment	—
Of new cases receiving DST at start of treatment, % MDR-TB	—
Of re-treatment cases notified, % receiving DST	—
Of re-treatment cases receiving DST, % MDR-TB	—

#### Collaborative TB/HIV activities

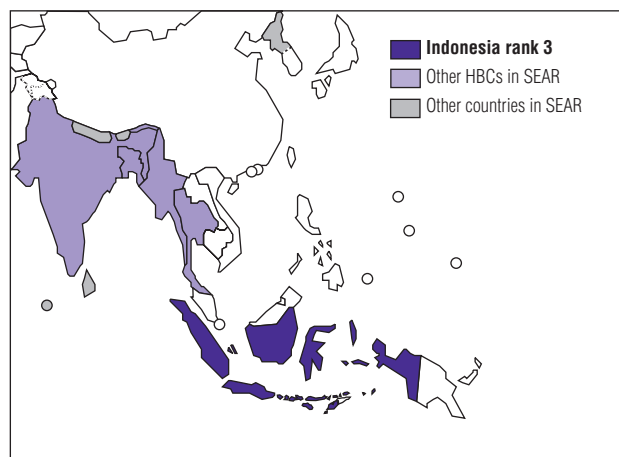
National policy of counselling and testing TB patients for HIV?	No policy
National surveillance system for HIV-infection in TB patients?	No
Of TB patients (new and re-treatment) notified, % tested for HIV	—
Of TB patients tested for HIV, % HIV+	—
Of HIV+ TB patients detected, % receiving CPT	—
Of HIV+ TB patients detected, % receiving ART	—

#### DOTS expansion and enhancement

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DOTS coverage (%)	6.0	14	28	80	90	98	98	98	98	98	98	98
DOTS notification rate (new and relapse/100 000 pop)	1.8	7.3	11	20	33	32	43	71	79	94	113	121
DOTS notification rate (new ss+/100 000 pop)	1.8	5.9	9.6	16	24	24	25	35	42	58	70	77
DOTS case detection rate (all new cases, %)	0.6	2.4	3.7	6.7	12	12	16	27	31	38	46	51
DOTS case detection rate (new ss+, %)	1.3	4.4	7.4	12	19	20	21	30	37	52	65	73
Case detection rate within DOTS areas (new ss+, %) <sup>a</sup>	21	32	26	15	21	20	22	31	38	54	67	74
DOTS treatment success (new ss+, %)	91	81	54	58	50	87	86	86	87	90	91	—
DOTS re-treatment success (ss+, %)	32	—	—	73	70	72	83	78	78	82	78	—

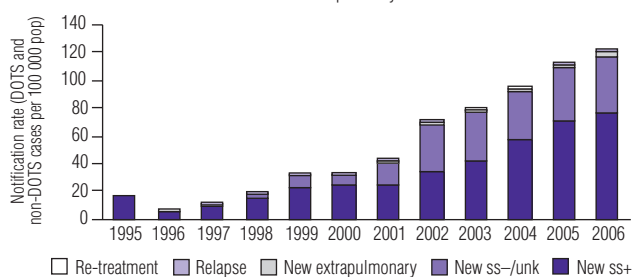
#### WHO South-East Asia Region (SEAR)

Rank based on estimated number of incident cases (all forms) in 2006



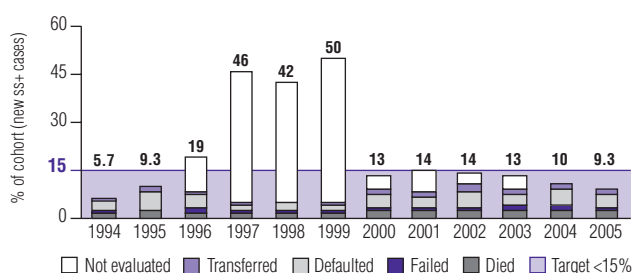
#### Case notifications

Dramatic increase in case notifications over the past 10 years



#### Unfavourable treatment outcomes, DOTS

Treatment success rate target originally reached with 2000 cohort and outcomes have improved since. Outcomes reported for nearly all new ss+ patients registered for treatment in 2005



**IMPLEMENTING THE STOP TB STRATEGY<sup>1</sup>****DOTS EXPANSION AND ENHANCEMENT****Political commitment, standardized treatment, and monitoring and evaluation system****Achievements**

- Produced NTP strategic plan for 2006–2010
- Developed and began implementation of electronic TB reporting and recording system
- Piloted registration of TB patients at health services units in order to improve quality of surveillance
- Initiated TB/HIV implementation by conducting a national TB/HIV symposium
- Began rapid involvement of hospital DOTS linkage including endorsement of ISTC and PCTC
- Produced annual report of NTP activities

**Planned activities**

- Implement electronic TB recording and reporting system nationwide

**Quality-assured bacteriology****Achievements**

- Developed guidelines for EQA and TB laboratory management biosafety
- Prepared for first DRS in Central Java Province
- Conducted EQA of 3 laboratories for culture and DST

**Planned activities**

- Begin preparation for establishment of regional reference laboratory and 7 new provincial laboratories
- Implement and update LQAS in 3 pilot sites
- Complete testing of samples from 1st DRS
- Develop culture and DST guidelines (based on WHO guidelines)

**Drug supply and management system****Achievements**

- Began training on management of anti-TB drug supplies

**Planned activities**

- Improve drug management, planning, distribution, procurement and quality control
- Roll out drug management/logistics training for staff at all levels
- Procure paediatric FDCs and establish procurement of second-line anti-TB drugs

**TB/HIV, MDR-TB AND OTHER CHALLENGES****Collaborative TB/HIV activities****Achievements**

- Pilot tested implementation of collaborative TB/HIV activities in health-care centres in 6 provinces

**Planned activities**

- Finalize national policy on collaborative TB/HIV activities in Indonesian and in English
- Review and revitalize national TB/HIV working group
- Implement collaborative TB/HIV activities in ARV referral hospitals
- Update guidelines on diagnosis and treatment of TB in HIV-positive people
- Develop TB/HIV surveillance system

**Diagnosis and treatment of multidrug-resistant TB****Achievements**

- Completed preparation for GLC assessment
- Established working group on management of MDR-TB

**Planned activities**

- Apply to GLC and prepare for management of MDR-TB
- Develop guidelines for management of MDR-TB

**High-risk groups and special situations****Achievements**

- Included specific activities for prison populations, such as collaborative TB/HIV activities, in NTP plan for TB control

**Planned activities**

- Establish special TB control initiatives for hard-to-reach areas (e.g. Papua)
- Formalize TB control activities in prisons through memorandum of understanding with Ministry of Justice
- Develop guidelines for TB control in the workplace
- Develop specific plan for urban TB control

**HEALTH SYSTEM STRENGTHENING, INCLUDING HUMAN RESOURCE DEVELOPMENT****Achievements**

- Planning for TB control involved sector-wide and intersectoral collaboration
- Strengthened management capacity at provincial and district levels through provincial DOTS teams
- Advocated for increased health budget (inclusive of TB) from parliament

**Planned activities**

- Develop networks and partnerships with other stakeholders
- Strengthen managerial capacities of staff by conducting leadership and management training courses
- Introduce and pilot test PAL initiatives, including tobacco use cessation activities

<sup>1</sup> Unless otherwise specified, achievements are for financial year 2006; planned activities are for financial year 2007.

**ENGAGING ALL CARE PROVIDERS****Achievements**

- Adapted ISTC for professional organizations
- Implemented formal PPM activities in 235 districts/municipalities
- Developed TB control curricula for medical schools
- Collaborated with professional organizations in order to standardize TB diagnosis and treatment
- Established linkages and partnerships with professional societies and NGOs

**Planned activities**

- Include ISTC in training materials for hospitals and private practitioners
- Standardize diagnosis and treatment of TB by non-NTP providers using ISTC
- Strengthen provision of TB services for diagnosis and treatment in hospitals
- Initiate TB control in private/NGO clinics and in prisons
- Promote ISTC to professional organizations and societies
- Organize workshop on Stop TB Strategy for professional organizations

**EMPOWERING PEOPLE WITH TB, AND COMMUNITIES****Advocacy, communication and social mobilization****Achievements**

- Developed and began pilot testing ACSM guidelines and training modules
- Developed toolkit for health-care providers
- Prepared for national TB awareness campaign

**Planned activities**

- Develop advocacy materials for stakeholders
- Launch year-long national TB awareness media campaign
- Finalize training module and guidelines for ACSM based on results of 2006 pilot project

**Community participation in TB care****Achievements**

- Organized and supported working group on community-based TB care
- Completed review of community-based TB care in West Nusa Tenggara, Lampung, Padang and Jakarta provinces

**Planned activities**

- Continue to support working group activities
- Develop indicators and tools for community participation in TB control
- Pilot test village TB posts
- Expand community participation initiative

**Patients' Charter****Achievements**

- Officially endorsed and launched Charter on World TB Day
- Distributed 200 copies of Charter to partners

**Planned activities**

- Support development of patient groups for improving their involvement in TB Control

**RESEARCH, INCLUDING SPECIAL SURVEYS AND IMPACT MEASUREMENT****Achievements**

- Conducted HIV seroprevalence survey among TB patients in Yogyakarta Province (in collaboration with Gadjah Mada University, Yogyakarta)
- Carried out infection survey in West Sumatera (in collaboration with University of Indonesia)
- Conducted feasibility study for establishment of sentinel sites for surveillance of TB mortality (NIHRD), including testing of verbal autopsy questionnaires
- Assessed implementation of DOTS in hospitals, and potential introduction of management of MDR-TB in hospitals
- Adapted WHO planning and budgeting tool for use at provincial and district levels

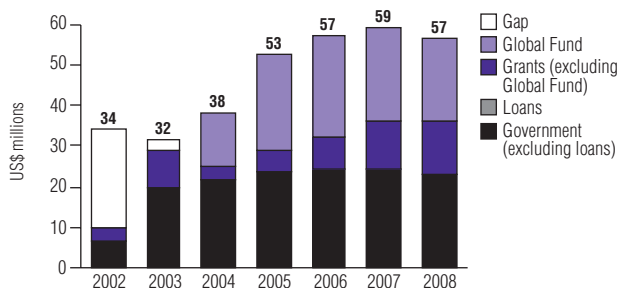
**Planned activities**

- Conduct infection survey in Central Java and East Nusa Tenggara (in collaboration with University of Indonesia)
- Establish sentinel sites for surveillance of TB mortality (NIHRD) in 4 provinces
- Conduct cost evaluation analysis of PPM activities in Yogyakarta
- Conduct study of TB financing at district level in 7 districts
- Pilot test use of WHO planning and budgeting tool at provincial and district levels
- Expand study of HIV seroprevalence in TB patients to 5 provinces (Papua, West Java, EastJava, Riau Island and Jakarta)
- Hold workshops on operational research in 4 provinces

**FINANCING THE STOP TB STRATEGY**

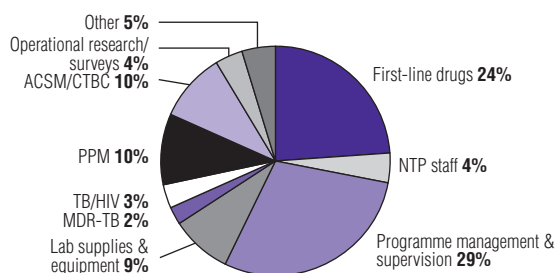
**NTP budget by source of funding**

Budget for TB control fully funded since 2004; important increase in funding from grants, both from Global Fund and other donors



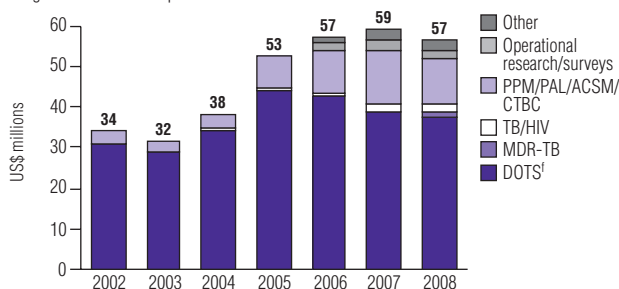
**NTP budget by line item, 2008**

DOTS expansion and enhancement (66%) and PPM (10%) account for the highest share of the NTP budget; the share for MDR-TB is low – plans for treatment of MDR-TB cover less than 1% of estimated cases



**NTP budget by line item**

Increased budget for PPM and ACSM since 2006; first year of budget for second-line drugs for 100 MDR-TB patients

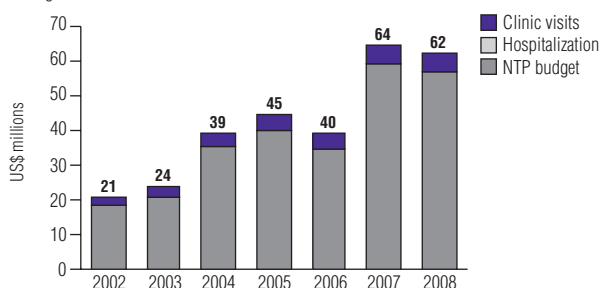


**NTP funding gap by line item**

Breakdown of funding gap in 2002 and 2003 by line item not available; no funding gaps have been reported since 2004

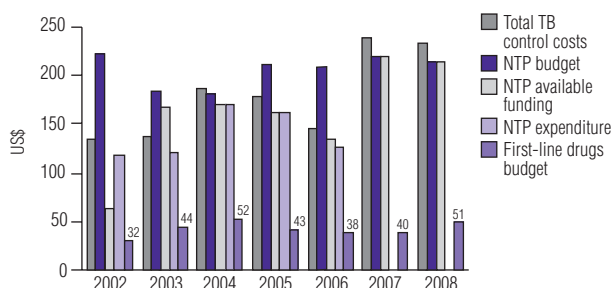
**Total TB control costs by line item<sup>4</sup>**

NTP budget accounts for biggest share of TB control costs; no costs for hospitalization are estimated and on average each new TB patient visits a health facility 16 times during treatment



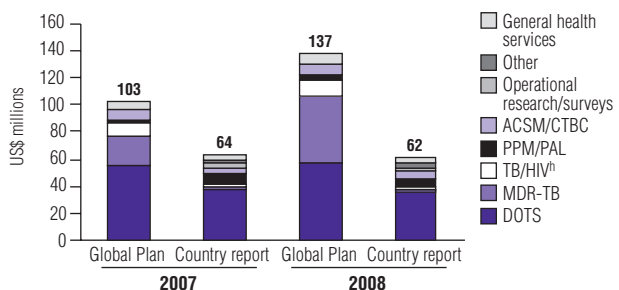
**Per patient costs, budgets and expenditures<sup>5</sup>**

NTP expenditures per patient in 2006 lowest since 2004



**Comparison of country report and Global Plan:<sup>9</sup> total TB control costs, 2007–2008**

Costs based on country report lower than costs in Global Plan because (i) targets for MDR-TB patients to be treated in Global MDR/XDR Response Plan much higher than plans of NTP and (ii) estimated number of new TB patients to be treated higher in Global Plan compared to country report



**NTP budget and funding gap by Stop TB Strategy component**

(US\$ millions)	2007		2008	
	BUDGET	GAP	BUDGET	GAP
DOTS expansion and enhancement	39	0	37	0
TB/HIV, MDR-TB and other challenges	2.5	0	3.3	0
Health system strengthening	0	0	0	0
Engage all care providers	8.2	0	5.6	0
People with TB, and communities	4.7	0	5.5	0
Research	2.7	0	2.3	0
Other	2.4	0	2.6	0

**Financial indicators for TB**

Government contribution to NTP budget (including loans)	41%	41%
Government contribution to total cost of TB control (including loans)	45%	46%
NTP budget funded	100%	100%
<i>Per capita health financial indicators (US\$)</i>		
NTP budget per capita	0.3	0.2
Total costs for TB control per capita	0.3	0.3
Funding gap per capita	0	0
Government health expenditure per capita (2004)		11
Total health expenditure per capita (2004)		33

**SOURCES, METHODS AND ABBREVIATIONS**

<sup>a-h</sup> Please see footnotes page 169.

<sup>1</sup> Incidence, prevalence and mortality estimates include patients infected with HIV. Estimates of incidence and prevalence, and trend in incidence, revised in 2004 following national TB prevalence survey.

<sup>2</sup> 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 438/100 000 pop and mortality 90/100 000 pop/yr.

<sup>3</sup> 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, there should be at least one culture facility and one DST facility in each of the 30 states.

<sup>4</sup> 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.

<sup>5</sup> 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.