

## COUNTRY PROFILE

# Ethiopia

The Ethiopian Ministry of Health has declared the ambitious target of increasing case detection to 60% in 2007. The expansion of the network of general health-care facilities will help with this goal, as will plans to increase the involvement of Health Extension Workers in identification and referral of TB suspects, and to continue the scale up of collaboration with private health clinics. Intensified case-finding among HIV patients would also contribute. However, numerous challenges face the NTP, including retaining skilled staff, adequately supervising the activities of the programme and improving the relationship with the laboratories. The treatment success rate is low, partly as a result of poor reporting. The integration of TB recording and reporting into a multi-disease information system, unless carefully managed, is likely to result in a further deterioration in the quality of routinely collected data.

### SURVEILLANCE AND EPIDEMIOLOGY, 2006

**Population** (thousands)<sup>a</sup> 81 021

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

Incidence (all cases/100 000 pop/yr)	379
Trend in incidence rate (%/yr, 2005–2006) <sup>2</sup>	-1.3
Incidence (ss+/100 000 pop/yr)	168
Prevalence (all cases/100 000 pop) <sup>2</sup>	643
Mortality (deaths/100 000 pop/yr) <sup>2</sup>	84
Of new TB cases, % HIV+ <sup>b</sup>	6.3
Of new TB cases, % MDR-TB (2005) <sup>c</sup>	1.6
Of previously treated TB cases, % MDR-TB (2005) <sup>c</sup>	12

#### Surveillance and DOTS implementation

Notification rate (new and relapse/100 000 pop/yr)	151
Notification rate (new ss+/100 000 pop/yr)	45
DOTS case detection rate (new ss+, %)	27
DOTS treatment success (new ss+ cases, 2005 cohort, %)	78
Of new pulmonary cases notified under DOTS, % ss+	48
Of new cases notified under DOTS, % extrapulmonary	36
Of new ss+ cases notified under DOTS, % in women	45
Of sub-national reports expected, % received at next reporting level <sup>d</sup>	100

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

Number of laboratories performing smear microscopy	713
Number of laboratories performing culture	1
Number of laboratories performing DST	1
Of laboratories performing smear microscopy, % covered by EQA	0

#### Management of MDR-TB

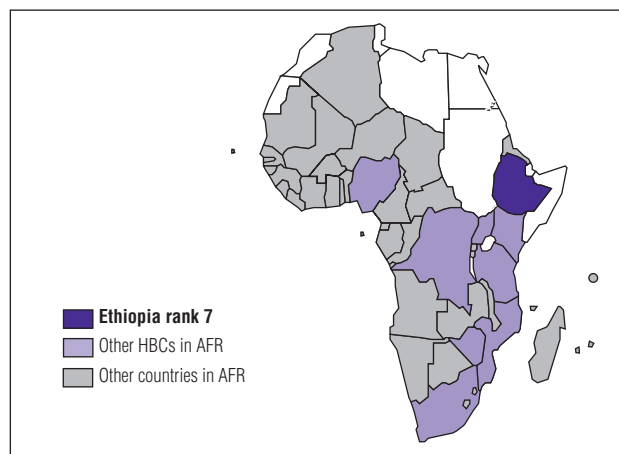
Of new cases notified, % receiving DST at start of treatment	–
Of new cases receiving DST at start of treatment, % MDR-TB	–
Of re-treatment cases notified, % receiving DST	–
Of re-treatment cases receiving DST, % MDR-TB	–

#### Collaborative TB/HIV activities

National policy of counselling and testing TB patients for HIV? (to all patients)	Yes
National surveillance system for HIV-infection in TB patients?	Yes
Of TB patients (new and re-treatment) notified, % tested for HIV	2.6
Of TB patients tested for HIV, % HIV+	40
Of HIV+ TB patients detected, % receiving CPT	86
Of HIV+ TB patients detected, % receiving ART	27

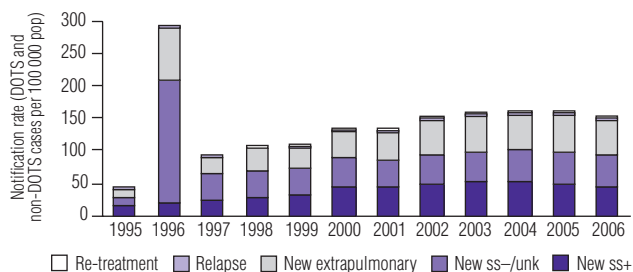
#### WHO Africa Region (AFR)

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



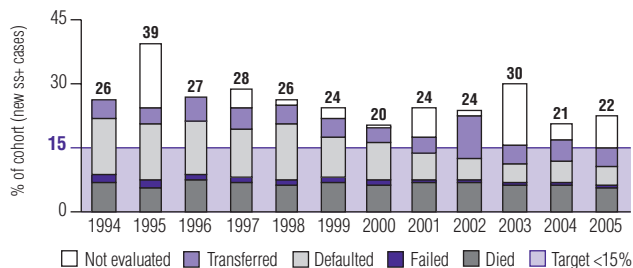
#### Case notifications

Notifications equally spread among ss+, ss– and extrapulmonary, suggesting underutilization of microscopy for diagnosis, and possible over-diagnosis of extrapulmonary cases



#### Unfavourable treatment outcomes, DOTS

Treatment success rate remains below target; treatment outcomes not reported for 7% of 2005 cohort



DOTS expansion and enhancement	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DOTS coverage (%)	39	39	48	64	63	85	70	95	95	70	90	100
DOTS notification rate (new and relapse/100 000 pop)	43	67	92	106	107	131	133	151	157	160	157	151
DOTS notification rate (new ss+/100 000 pop)	15	21	25	29	32	44	46	50	53	54	49	45
DOTS case detection rate (all new cases, %)	19	27	35	37	35	40	37	40	40	40	40	39
DOTS case detection rate (new ss+, %)	15	20	22	23	24	30	30	30	31	31	29	27
Case detection rate within DOTS areas (new ss+, %) <sup>a</sup>	38	51	45	36	38	36	43	32	33	45	32	27
DOTS treatment success (new ss+, %)	61	73	72	74	76	80	76	76	70	79	78	–
DOTS re-treatment success (ss+, %)	79	71	69	60	74	71	64	60	60	54	56	–

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

- Received approval for Global Fund round 6 proposal for TB control activities
- Finalized 2007–2010 Strategic Plan for TB Control with participation and agreement of all stakeholders
- Revised standard regimen for Category III
- Developed monitoring and evaluation plan for NTP
- Recruited data manager, but planned move to integrated health information system poses challenges
- Produced annual report of NTP activities

**Planned activities**

- Improve case detection through identification of TB suspects by health extension workers (HEWs), through collaboration with private health clinics and expansion of the network of general health clinics
- Update, disseminate and implement the new manual for management of TB and leprosy
- Conduct Global Fund 5-year assessment surveys

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

- Set up EQA system for sputum microscopy
- Revised AFB microscopy and EQA manual
- Conducted training of peripheral-level laboratory staff in all regions

**Planned activities**

- Strengthen EQA system for sputum microscopy
- Establish 6 regional reference laboratories with culture and DST facilities
- Open 120 new TB diagnostic facilities with AFB microscopy
- Recruit and equip national laboratory consultants for six regions in order to strengthen the EQA system

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

- Developed plan for procurement of drugs and management of supplies

**Planned activities**

- Obtain paediatric anti-TB formulations from GDF

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

- Established functional TB/HIV Advisory Council and TB/HIV Technical Working Group
- Updated national guidelines on implementation of collaborative TB/HIV activities
- Trained over 800 health staff on collaborative TB/HIV activities
- Pilot collaborative TB/HIV activities expanded to more than 330 health facilities, 98 of which are hospitals
- Drafted comprehensive TB/HIV plan of action involving most stakeholders

**Planned activities**

- Improve monitoring and reporting of TB/HIV activities at all levels
- Reinforce human resources for collaborative TB/HIV activities
- Develop and implement guidelines on infection control in main hospitals

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

- MDR-TB addressed and granted approval in the round 6 Global Fund proposal
- Developed MDR-TB control plan
- Established functional MDR-TB technical advisory group

**Planned activities**

- Develop guidelines for MDR-TB management and treatment
- Procure second-line TB drugs for 100 patients in the first year
- Set up MDR-TB treatment centre in Addis Ababa (St Peter's Hospital)
- Provide necessary MDR-TB training to health workers and health managers

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

- Included specific targets in the strategic plan

**Planned activities**

- None described

**Health system strengthening, including human resource development****Achievements**

- Trained over 900 health-care workers and public health managers in diagnosis and treatment of TB and leprosy
- Supplied office and transport equipment for the regional health bureaux
- Developed plan for PAL adaptation and implementation

**Planned activities**

- Strengthen diagnostic facilities through provision of X-ray machines, fluorescence microscopes, culture and DST equipment and vehicles for regional laboratories
- Standardize training material on TB and on TB/HIV
- Develop specific training material on TB for physicians

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

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

- Published guidelines for management of TB in private health facilities
- Pilot tested PPM projects in 21 private health facilities; NTP provided training and anti-TB drugs

**Planned activities**

- Expand PPM to 100 private health facilities in 3 regions
- Initiate collaborative TB/HIV activities in all PPM facilities
- Supervise PPM activities and assess their performance

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

- Broadcast radio and TV messages aimed at improving health-seeking behaviour of people with TB
- Developed and disseminated posters and flyers to the general public and to community workers

**Planned activities**

- Develop and disseminate posters and flyers on TB awareness for the general public

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

- Sensitized community health extension workers (HEWs) on identification and referral of TB suspects
- Conducted sensitization workshops for community leaders on community TB control

**Planned activities**

- Develop training curriculum and modules for HEWs
- Train and supervise all HEWs to educate and mobilize the community for identification and referral of TB suspects
- Develop and disseminate reference materials for health extension workers

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

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

**Planned activities**

- None reported

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

- Conducted studies on variations of sputum smear microscopy techniques and diagnosis of extrapulmonary TB (lymph nodes)

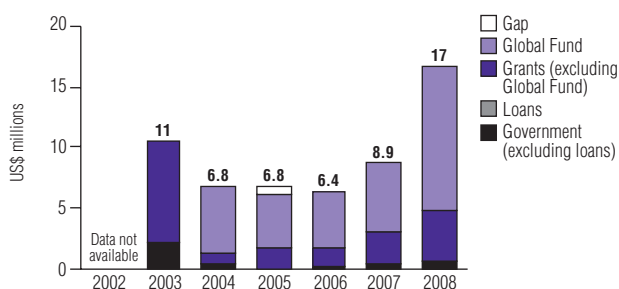
**Planned activities**

- Study health-seeking behaviour, gender disparities and contact tracing

**FINANCING THE STOP TB STRATEGY**

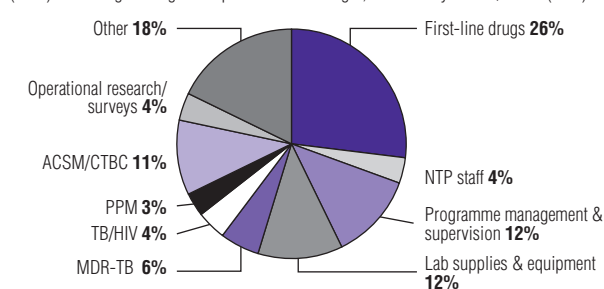
**NTP budget by source of funding**

Substantial increase in budget and external funding in 2008, mainly from the Global Fund and other donors



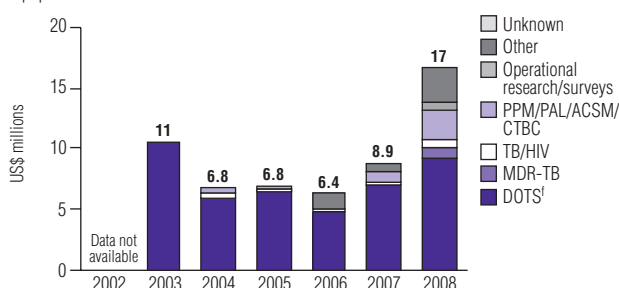
**NTP budget by line item, 2008**

Budget has been developed for almost all interventions of the Stop TB Strategy; DOTS (55%) is the largest single component of the budget, followed by ACSM/CTBC (11%)



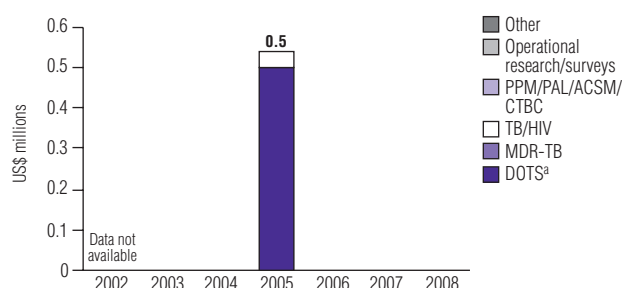
**NTP budget by line item**

Increased budget in 2008 for DOTS component mainly for laboratory supplies and equipment



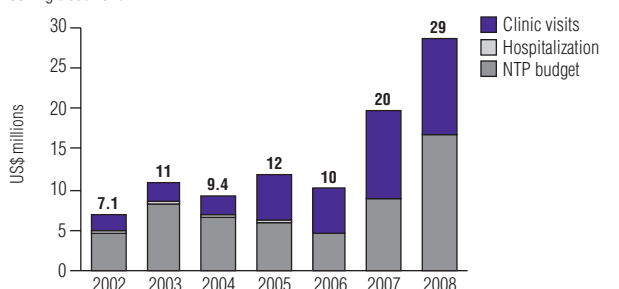
**NTP funding gap by line item**

Funding gap reported only in 2005



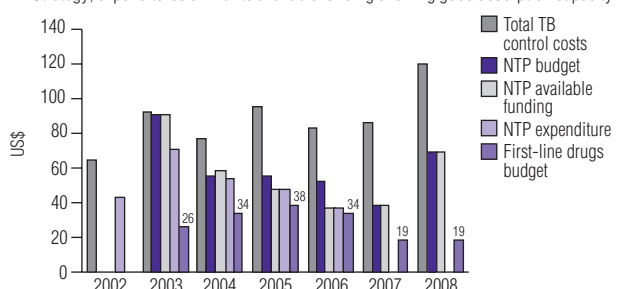
**Total TB control costs by line item<sup>4</sup>**

Costs for clinic visits based on 66 outpatient visits per new TB patient to health facilities during treatment



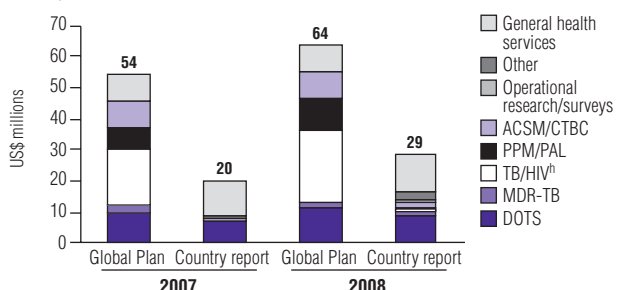
**Per patient costs, budgets and expenditures<sup>5</sup>**

Increased costs and budget per patient as TB control activities broadened in line with Stop TB Strategy; expenditures similar to available funding showing good absorption capacity



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

Country reports similar to Global Plan for the DOTS component; much higher budget for TB/HIV, PPM and ACSM in Global Plan



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

(US\$ millions)	2007		2008	
	BUDGET	GAP	BUDGET	GAP
DOTS expansion and enhancement	6.9	0	9.2	0
TB/HIV, MDR-TB and other challenges	0.3	0	1.7	0
Health system strengthening	0	0	0	0
Engage all care providers	0	0	0.5	0
People with TB, and communities	0.9	0	1.8	0
Research	0	0	0.6	0
Other	0.8	0	3.0	0

**Financial indicators for TB**

Government contribution to NTP budget (including loans)	7%	0%
Government contribution to total cost TB control (including loans)	58%	0%
NTP budget funded	100%	0%
<i>Per capita health financial indicators (US\$)</i>		
NTP budget per capita	0.2	0.2
Total costs for TB control per capita	0.2	0.3
Funding gap per capita	0	0
Government health expenditure per capita (2004)		2.9
Total health expenditure per capita (2004)		5.6

**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. Incidence based on assumption of 50% s+ case detection rate in 1997 (DOTS and non-DOTS). Trend in incidence estimated from 3-year moving average of notifications from those countries in region judged to be detecting an unchanging proportion of cases.

<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 308/100 000 pop and mortality 37/100 000 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, most countries will need one culture facility per 5 million population and one DST facility per 10 million population.

<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; s+, sputum smear-positive; ss-, sputum smear-negative pulmonary; unk, pulmonary – sputum smear not done or result unknown; yr, year.