COUNTRY PROFILE

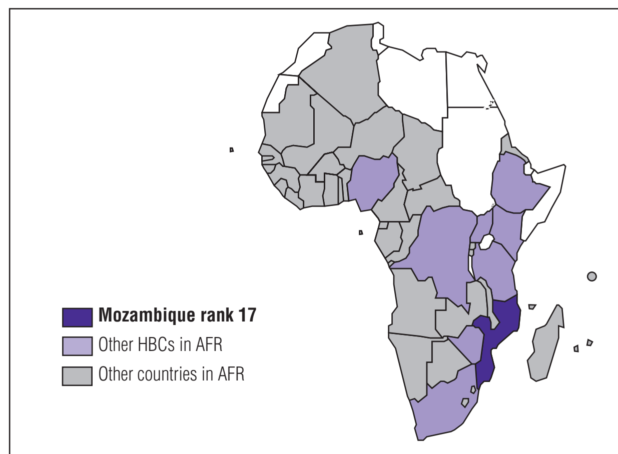
Mozambique

The national tuberculosis control programme is a priority programme of the Mozambique Ministry of Health. However, shortage of skilled human resources, and slow disbursement and absorption of funds continue to be obstacles to the progress of the NTP in Mozambique. While all districts are implementing DOTS, access to primary health care is poor, which may explain the low case detection rate, and high death rate among patients on treatment. Nonetheless, collaborative TB/HIV activities are now in place, and management of MDR-TB is being introduced, following WHO recommendations.

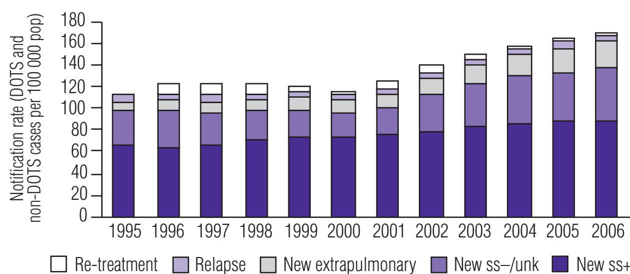
SURVEILLANCE AND EPIDEMIOLOGY, 2006

Population (thousands)[a]	20 971
Estimates of epidemiological burden[1]	
Incidence (all cases/100 000 pop/yr)	443
Trend in incidence rate (%/yr, 2005–2006)[2]	**-1.4**
Incidence (ss+/100 000 pop/yr)	186
Prevalence (all cases/100 000 pop)[2]	**624**
Mortality (deaths/100 000 pop/yr)[2]	**117**
Of new TB cases, % HIV+[b]	*30*
Of new TB cases, % MDR-TB (1999)[c]	3.5
Of previously treated TB cases, % MDR-TB (1999)[c]	3.3
Surveillance and DOTS implementation	
Notification rate (new and relapse/100 000 pop/yr)	168
Notification rate (new ss+/100 000 pop/yr)	87
DOTS case detection rate (new ss+, %)	**47**
DOTS treatment success (new ss+, 2005 cohort, %)	**79**
Of new pulmonary cases notified under DOTS, % ss+	63
Of new cases notified under DOTS, % extrapulmonary	15
Of new ss+ cases notified under DOTS, % in women	–
Of sub-national reports expected, % received at next reporting level[d]	100
Laboratory services[3]	
Number of laboratories performing smear microscopy	250
Number of laboratories performing culture	1
Number of laboratories performing DST	1
Of laboratories performing smear microscopy, % covered by EQA	4
Management of MDR-TB	
Of new cases notified, % receiving DST at start of treatment	0.2
Of new cases receiving DST at start of treatment, % MDR-TB	100
Of re-treatment cases notified, % receiving DST	8.2
Of re-treatment cases receiving DST, % MDR-TB	33
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	24
Of TB patients tested for HIV, % HIV+	70
Of HIV+ TB patients detected, % receiving CPT	17
Of HIV+ TB patients detected, % receiving ART	46

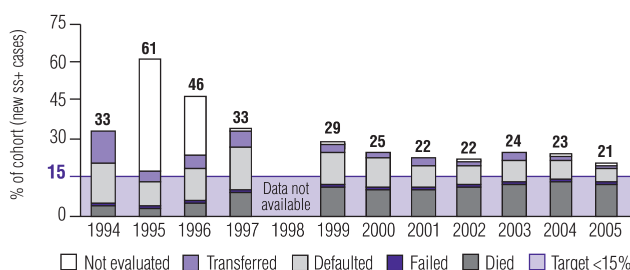
WHO Africa Region (AFR)
Rank based on estimated number of incident cases (all forms) in 2006



Case notifications
Gradual increase in notifications over past 5 years



Unfavourable treatment outcomes, DOTS
Reported death rate continues to be high, but treatment success has increased since 2004 cohort



DOTS expansion and enhancement	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DOTS coverage (%)	97	100	84	95	–	100	100	100	100	100	100	100
DOTS notification rate (new and relapse/100 000 pop)	112	112	112	114	–	116	118	134	146	155	162	168
DOTS notification rate (new ss+/100 000 pop)	66	64	66	70	–	73	75	80	82	85	87	87
DOTS case detection rate (all new cases, %)	40	38	35	33	–	28	27	29	31	33	35	36
DOTS case detection rate (new ss+, %)	57	52	50	49	–	45	43	43	43	44	46	47
Case detection rate within DOTS areas (new ss+, %)[e]	59	52	59	52	–	45	43	43	43	44	46	47
DOTS treatment success (new ss+, %)	39	54	67	–	71	75	78	78	76	77	79	–
DOTS re-treatment success (ss+, %)	–	70	64	–	71	71	68	67	68	–	70	–

IMPLEMENTING THE STOP TB STRATEGY[1]

DOTS EXPANSION AND ENHANCEMENT

Political commitment, standardized treatment, and monitoring and evaluation system

Achievements

- Developed national strategy and training materials for introduction of community-based DOTS
- Published new manual on management of paediatric TB
- Produced annual report of NTP activities

Planned activities

- Finalize the National Strategic Plan for TB Control 2008–2012
- Disseminate paediatric TB manual and begin implementation of recommendations, including training of doctors (to be continued in 2008)

Quality-assured bacteriology

Achievements

- Commenced preparation for the DRS
- Conducted refresher laboratory training for 80 laboratory technicians in 4 out of 10 provinces
- Recruited 2 laboratory technicians and 2 biologists

Planned activities

- Start drug resistance survey in February 2007, to be completed by April 2008
- Perform evaluation for renovation of reference laboratories in regional hospitals in Beira and Nampula
- Conduct situation analysis for renovation of NRL in Maputo
- Recruit 2 additional biologists

Drug supply and management system

Achievements

- Established quality control measures for non-GDF first-line anti-TB drugs

Planned activities

- Recruit pharmacist (part time) to support the NTP and to improve drug management
- Train staff in drug management and supervision
- Create technical working group (including WHO, National Drug Store and Regulatory Department of the MoH) to strengthen drug management by establishing buffer stocks at all levels, and revise TB manual to include use of FDCs and of rifampicin in the continuation phase of categories I and III regimens

TB/HIV, MDR-TB AND OTHER CHALLENGES

Collaborative TB/HIV activities

Achievements

- Trained 22 TB supervisors/deputy supervisors in voluntary HIV counselling and testing for all TB patients, in CPT for TB/HIV patients and in referring these patients to public centres for access to ART
- Created a national TB/HIV task force including all TB, TB/HIV, MoH and partners supporting the TB control programme. Monthly meetings of the task force focus on planning, monitoring and evaluation, supervision, training and coordination of all TB/HIV activities. The task force was notably involved in drafting the round 7 grant proposal of the Global Fund and the finalizing the strategic plan
- Developed TB/HIV IEC materials and updated the TB/HIV module for clinicians
- Formulated a matrix to monitor HIV prevalence among TB patients
- Trained 237 TB health workers in all provinces including on HIV counselling and testing

Planned activities

- In coordination with NAP, identify one TB/HIV coordinator for the NAP and one (full-time) for the NTP
- In collaboration with MoH, ensure inclusion of TB in NAP plan
- Expand implementation of regular TB screening and provision of IPT in HIV-positive people, to be expanded to all provinces in 2008
- Revise and update TB/HIV monitoring and evaluation forms

Diagnosis and treatment of multidrug-resistant TB

Achievements

- Appointed a national MDR-TB focal point and 22 MDR-TB provincial focal points, following two training courses in management of MDR-TB
- Developed a national MDR-TB/XDR-TB operational plan
- Undertook two national MDR-TB training courses for 42 clinicians
- Initiated treatment for 70 MDR-TB patients
- Trained 42 clinicians (38 doctors and 4 medical technicians) in the management of MDR-TB patients

Planned activities

- Computerize data for ongoing DRS as well as laboratory data on MDR-TB/XDR-TB
- Conduct DRS and introduce new data collection system
- Continue training for clinicians and other health professionals in programmatic management of MDR-TB/XDR-TB
- Reinforce ongoing infection control measures by identifying more patient isolation wards at provincial level (at least 4 beds per provincial hospital) and distribute N95 respirators to all MDR-TB health facilities
- Apply to GLC for approval of projects planned for 2008–2009
- Train at least 100 health professionals (including doctors and nurses) in management of MDR-TB patients

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

High-risk groups and special situations

Achievements

- Addressed TB control in situations of political unrest and following natural disasters

Planned activities

- Disseminate new manual and train staff in management of paediatric TB
- Begin introduction of TB screening in national prison population and among other vulnerable groups

HEALTH SYSTEM STRENGTHENING, INCLUDING HUMAN RESOURCE DEVELOPMENT

Achievements

- Distributed 45 microscopes to districts, to be used by other disease programmes including those for STIs, leprosy, malaria and HIV/AIDS
- Began renovation of the reference laboratory in the Beira provincial hospital; this laboratory serves the province and the central region not only for TB but also for diagnosis of other diseases
- Trained 11 medical coordinators responsible for malaria, HIV, STIs, leprosy and TB at provincial level (within framework designed to integrate services in order to maximize the use of the existing human resources)
- Trained 22 clinicians on infection control in 11 provincial hospitals

Planned activities

- Further integrate training on TB control into general health system
- Purchase new microscopes for use by all programmes (TB, HIV, malaria, leprosy)
- With the support of NGOs, send two biologists for training (microbiology, bacteriology and other laboratory related areas) in Brazil
- Purchase 800 bicycles for use by community volunteers who, in addition to participating in community-based DOTS, work on leprosy, malaria and HIV/AIDS related activities

ENGAGING ALL CARE PROVIDERS

Achievements

- Conducted situation analysis for PPM

Planned activities

- Revise/update agreement on national policy for provision of TB services (diagnostics, treatment, etc.) with the private sector

EMPOWERING PEOPLE WITH TB, AND COMMUNITIES

Advocacy, communication and social mobilization

Achievements

- All districts carried out ACSM activities
- Updated the leaflet on 10 causal factors for TB
- Produced ACSM materials on DOTS and on TB/HIV and distributed these to all levels
- Appointed an assistant (nurse) to support the central unit in ACSM

Planned activities

- Produce a small integrated manual on health education and test it at provincial level in coordination with IEC department
- Make preparations for KAP study to be done in 2008
- Mobilize media (radio and TV) to disseminate information, educate population and raise awareness about TB on World TB Day and other occasions
- Identify IEC indicators and start collecting this information, which will be useful for improving programme performance and also for the KAP study to be done in 2008

Community participation in TB care

Achievements

- Performed a baseline assessment (during supervisory visits) on the existing conditions to reinforce community involvement
- Shared experiences with various NGOs in order to develop national strategy on community activities
- Developed the community-based DOTS strategy, with clear description of roles of volunteers, traditional healers and other stakeholders, and produced a variety of materials including the manual on community-based DOTS for health workers, the TB/HIV manual for community volunteers and the TB/HIV manual for family members of patients and others

Planned activities

- Introduce DOTS in the community followed by "training of trainers" for the 22 TB provincial supervisors/deputy supervisors and for members of NGOs
- Extract lessons learnt from the Manica project on the referral of suspects from traditional healers and expand it to other provinces

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

- None reported

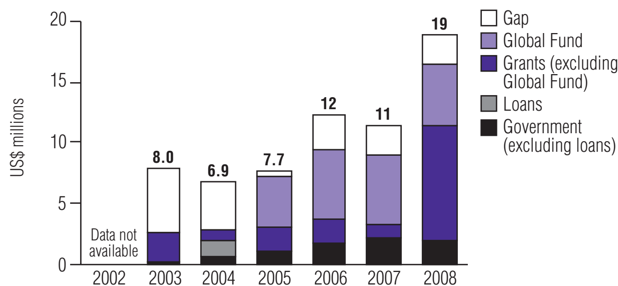
Planned activities

- Carry out national DRS
- Conduct clinical trial on therapeutic efficacy and clinical safety of the nevirapine versus the standard efavirenz-based ART in HIV-positive TB patients
- Perform rapid survey of XDR-TB among confirmed MDR-TB cases in collaboration with WHO in 2008

FINANCING THE STOP TB STRATEGY

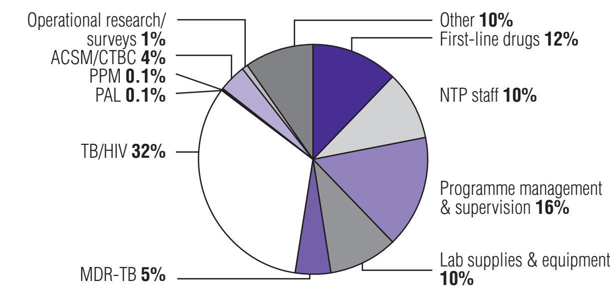
NTP budget by source of funding

NTP has developed plan and budget for 2008–2012 covering all elements of the Stop TB Strategy and that is in line with Global Plan targets; funding needs and funding gaps have been reassessed: budget requirements now higher than in previous years and increased funding from successful application to Global Fund in round 7



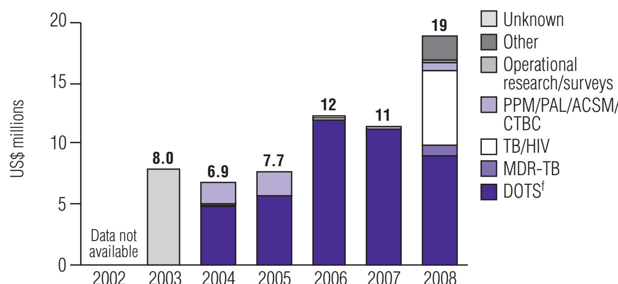
NTP budget by line item, 2008

The largest components of the budget are DOTS (42%) and collaborative TB/HIV activities (32%); the TB/HIV budget includes costs of activities funded via the NAP



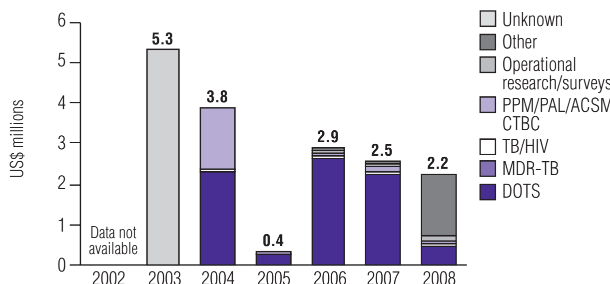
NTP budget by line item

Re-assessment of needs in line with the Stop TB Strategy in 2008; "Other" includes patient support and international technical assistance



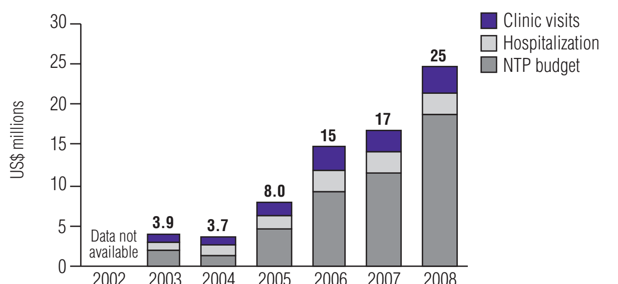
NTP funding gap by line item

Funding gap within DOTS mainly for routine programme management and supervision activities in 2007; funding gap within "Other" in 2008 is mainly for patient support



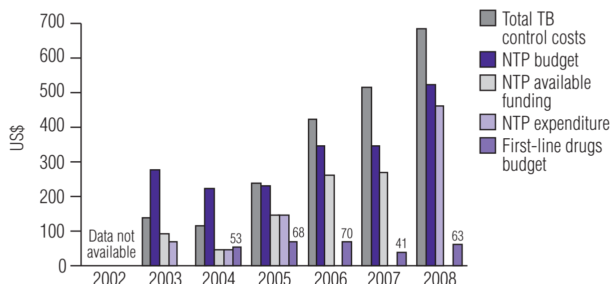
Total TB control costs by line item[4]

Hospitalization costs 2006–2008 based on revised estimate of 2258 dedicated TB beds in the country; outpatient costs based on 90 visits to a health facility per new TB patient during treatment



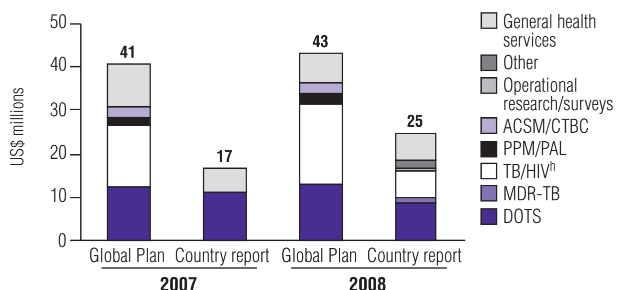
Per patient costs, budgets and expenditures[5]

Increased budget and cost per patient as TB control activities are broadened in line with the Stop TB Strategy



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

DOTS component similar in country report and Global Plan; country plan for TB/HIV component in 2008 reflects activities to be conducted by NAP as well as the NTP



NTP budget and funding gap by Stop TB Strategy component

(US$ millions)	2007 BUDGET	2007 GAP	2008 BUDGET	2008 GAP
DOTS expansion and enhancement	11	2.3	8.9	0.5
TB/HIV, MDR-TB and other challenges	0.1	0.1	7.1	0.1
Health system strengthening	0.02	0.02	0.02	0.02
Engage all care providers	0.02	0.02	0.02	0.01
People with TB, and communities	0.1	0.1	0.7	0.02
Research	0.1	0.1	0.2	0.1
Other	0.1	0.1	1.8	1.5

Financial indicators for TB

	2007	2008
Government contribution to NTP budget (including loans)	20%	11%
Government contribution to total cost of TB control (including loans)	45%	32%
NTP budget funded	78%	88%
Per capita health financial indicators (US$)		
NTP budget per capita	0.6	0.9
Total costs for TB control per capita	0.8	1.2
Funding gap per capita	0.1	0.1
Government health expenditure per capita (2004)	8.4	
Total health expenditure per capita (2004)	12	

SOURCES, METHODS AND ABBREVIATIONS

a–h Please see footnotes page 169.

1 Incidence, prevalence and mortality estimates include patients infected with HIV. Incidence estimate originally based on assumption of 70% ss+ 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.

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 298/100 000 pop and mortality 36/100 000 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 2003–2005 are based on expenditure, whereas those for 2006 are based on available funding, and 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 2004–2005 is based on the amount of funding actually received, using retrospective data; available funding for 2002–2003 and 2006–2008 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.