India

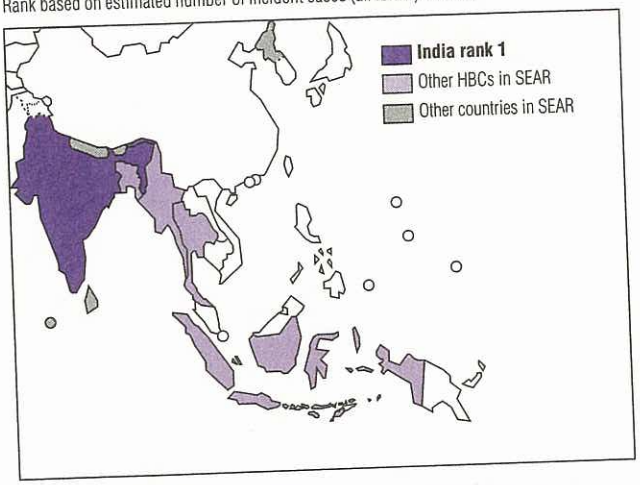
In reaching 100% DOTS coverage, the Revised National Tuberculosis Control Programme (RNTCP, hereafter NTP) of India has begun to operate in parts of the country that are particularly challenging. It remains to be seen if the Stop TB Strategy can be implemented as successfully in these districts as it has been in the rest of India. The introduction of MDR-TB treatment as part of routine programme activities will succeed only if the planned sub-national reference laboratories function properly, and if a reliable supply of high-quality second-line drugs is available. Plans to expand collaborative TB/HIV activities nationally will need to reflect the local variations in HIV epidemiology. Assessing the impact of TB control in India will require careful analysis of the extensive and detailed data that are routinely collected by the NTP, in addition to recent and planned surveys of the prevalence of infection and of disease.

SURVEILLANCE AND EPIDEMIOLOGY, 2006

Population (thousands)[a]	1 151 751
Estimates of epidemiological burden[1]	
Incidence (all cases/100 000 pop/yr)	168
Trend in incidence rate (%/yr, 2005–2006)[2]	**0.0**
Incidence (ss+/100 000 pop/yr)	75
Prevalence (all cases/100 000 pop)[2]	**299**
Mortality (deaths/100 000 pop/yr)[2]	**28**
Of new TB cases, % HIV+[b]	*1.2*
Of new TB cases, % MDR-TB[c]	*2.8*
Of previously treated TB cases, % MDR-TB[c]	*17*
Surveillance and DOTS implementation	
Notification rate (new and relapse/100 000 pop/yr)	107
Notification rate (new ss+/100 000 pop/yr)[3]	48
DOTS case detection rate (new ss+, %)[3]	**64**
DOTS treatment success (new ss+ cases, 2005 cohort, %)	**86**
Of new pulmonary cases notified under DOTS, % ss+	58
Of new cases notified under DOTS, % extrapulmonary	16
Of new ss+ cases notified under DOTS, % in women	31
Of sub-national reports expected, % received at next reporting level[d]	100
Laboratory services[4]	
Number of laboratories performing smear microscopy	11 968
Number of laboratories performing culture	8
Number of laboratories performing DST	8
Of laboratories performing smear microscopy, % covered by EQA	79
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	81
Collaborative TB/HIV activities	
National policy of counselling and testing TB patients for HIV?	Yes (for specific groups)
National surveillance system for HIV-infection in TB patients?	No
Of TB patients (new and re-treatment) notified, % tested for HIV	4
Of TB patients tested for HIV, % HIV+	15
Of HIV+ TB patients detected, % receiving CPT	–
Of HIV+ TB patients detected, % receiving ART	–

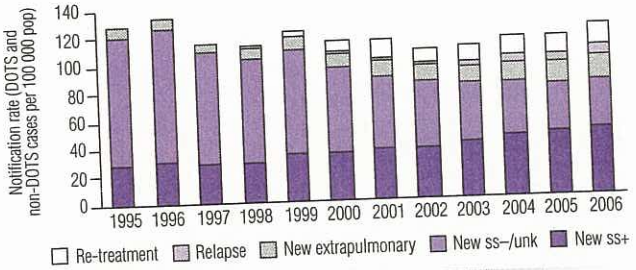
WHO South-East Asia Region (SEAR)

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



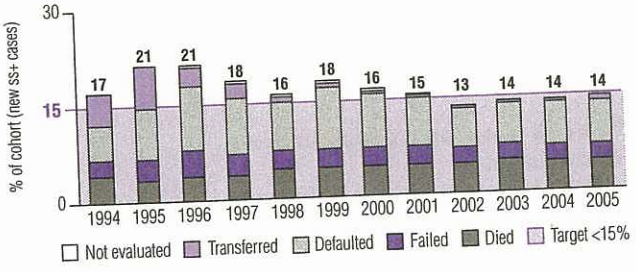
Case notifications

Notification rates of most case types increasing slightly; falling only for ss– pulmonary cases



Unfavourable treatment outcomes, DOTS

Treatment success rate target reached for 2001 cohort, but relatively unchanged since



DOTS expansion and enhancement	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DOTS coverage (%)	1.5	2.0	2.3	9.0	14	30	45	52	67	84	91	100
DOTS notification rate (new and relapse/100 000 pop)	0.5	1.6	1.8	2.9	12	20	38	51	73	94	101	107
DOTS notification rate (new ss+/100 000 pop)	0.2	0.6	0.8	1.2	5.2	9.1	17	23	33	42	45	48
DOTS case detection rate (all new cases, %)	0.3	0.9	1.0	1.6	6.5	11	22	28	41	53	56	59
DOTS case detection rate (new ss+, %)	0.3	0.8	1.0	1.6	6.8	12	23	30	43	55	59	64
Case detection rate within DOTS areas (new ss+, %)[e]	19	42	45	18	51	40	51	58	64	66	65	64
DOTS treatment success (new ss+, %)	79	79	82	84	82	84	85	87	86	86	86	–
DOTS re-treatment success (ss+, %)	70	67	65	72	69	71	69	72	70	73	71	–

IMPLEMENTING THE STOP TB STRATEGY[1]

DOTS EXPANSION AND ENHANCEMENT

Political commitment, standardized treatment, and monitoring and evaluation system

Achievements

- Expanded DOTS to the entire country (628 districts) in March 2006
- Secured long-term funding for TB activities under the World Bank credit agreement
- Received approval for the Global Fund round 6 proposal for TB control activities
- Hosted 3-yearly external evaluation (joint monitoring mission) in October 2006
- Produced 7th annual report of NTP activities

Planned activities

All planned activities reported for 2007 are described under the headings below.

Quality-assured bacteriology

Achievements

- Implemented full range of EQA activities for sputum microscopy in nearly 80% of peripheral microscopy units

Planned activities

- Scale up the full range of EQA activities to 100% of microscopy centres

Drug supply and management system

Achievements

- Procured and introduced paediatric patient-wise boxes, with assistance from GDF and DFID

Planned activities

- Provide training in drug logistics to national-level master trainers, and to national- and state-level officials involved in drug management

TB/HIV, MDR-TB AND OTHER CHALLENGES

Collaborative TB/HIV activities

Achievements

- Established cross-referral mechanisms in 14 states; implemented intensified TB case-finding in integrated counselling and testing centres; and introduced selective referral of TB patients for voluntary HIV counselling and testing
- Scaled up periodic HIV survey in TB patients to 15 districts with differing HIV levels in women attending antenatal clinics

Planned activities

- Expand intensified TB case-finding in VCT centres, ART centres, and care and support centres countrywide
- Implement VCT for TB patients (selective in all states, to all TB patients in high HIV-prevalence settings)
- Strengthen collaborations countrywide at state and district levels via frequent meetings and reviews by coordination committees
- Pilot test the following: decentralized delivery of CPT through NTP; implementation of "shared confidentiality" of HIV status within the health-care system in order to improve coordination of TB and HIV care; and routine offer of voluntary HIV testing and counselling to all TB patients in 2 districts

Diagnosis and treatment of multidrug-resistant TB

Achievements

- Developed and published national guidelines for treatment of MDR-TB
- Completed DRS in the states of Gujarat and Maharashtra, and initiated in Andhra Pradesh
- Supplied culture and DST equipment to intermediate reference laboratories in 13 states; started accreditation process for these laboratories

Planned activities

- Launch management of MDR-TB in Gujarat and Maharashtra: MDR-TB suspects identified and DST carried out in March 2007, first cohort of patients began treatment in August 2007
- Introduce management of MDR-TB in 4 more states: Andhra Pradesh, Delhi, Haryana and Kerala
- Complete accreditation of 13 out of 18 intermediate reference laboratories
- Promote the rational use of second-line anti-TB drugs by all health-care providers

High-risk groups and special situations

Achievements

- Initiated national guidelines for TB diagnosis and treatment among long-term and short-term prisoners
- Implemented specific action plan for TB control in tribal population
- NGOs and support groups collaborated with NTP to improve access to DOT for refugees, displaced people, migrant workers, immigrants, homeless people, and individuals dependent on alcoholic and drugs
- Introduced PPM activities in urban areas, including slums

Planned activities

- Implement tribal action plans at district level: increase human resources, expand network of diagnostic centres, provide incentives to patients for travel to diagnostic centres

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

HEALTH SYSTEM STRENGTHENING, INCLUDING HUMAN RESOURCE DEVELOPMENT

Achievements

- Planning for TB control involved sector-wide and intersectoral collaboration, including close involvement of the NTP in planning the ongoing primary health-care reform by the National Rural Health Mission (NRHM)

Planned activities

- Continue active engagement with NRHM to support its elements for health system strengthening, while ensuring that essential TB control functions are protected and that an acceptable level of infrastructure, facilities and services at all levels in the NTP are maintained as per the Indian Public Health Standards formulated by the NRHM
- NTP will continue to provide human resources to fill critical gaps in the health system (e.g. laboratory technicians) and to provide additional sub-district level TB supervisors to maintain the supervision for and monitoring of the programme

ENGAGING ALL CARE PROVIDERS

Achievements

- Adopted ISTC in order to improve the standards of TB management across all sectors of health-care in India; ISTC now included in the NTP training module for private practitioners
- Continued scale up of PPM activities, including provision of anti-TB drugs free of charge to selected collaborating non-NTP providers; PPM now in place in almost all districts
- Formed national professional coalition of chest physicians', paediatricians' and family physicians' associations in 2007

Planned activities

- Revise PPM guidelines for NGOs and private practitioners
- Develop guidelines for further involvement of the Employee State Insurance and Railways health facilities in TB control
- Work with the Indian Medical Association to increase the number of private practitioners collaborating with the NTP

EMPOWERING PEOPLE WITH TB, AND COMMUNITIES

Advocacy, communication and social mobilization

Achievements

- Undertook mass media activities in collaboration with national telecast network and with other disease control programmes
- Developed and implemented, in all states and districts, needs-based ACSM activities for patients and communities, health-care providers and decision-makers
- Strengthened capacity of NTP staff in states and districts to plan and implement locally relevant ACSM activities, including local training, and participatory approaches adapted to the social and cultural context

Planned activities

- Hire a media agency at the national level to undertake electronic media activities, develop new material for use in targeted audiences such as private providers, and prepare material for use in medical colleges, for enhancing patient–provider interaction and to support and involve community groups
- Develop IEC baseline document to guide future capacity-enhancing interventions
- Encourage states and districts to develop ACSM activities focusing on tribal and other hard-to-reach populations

Community participation in TB care

Achievements

- Involved communities in TB control activities in all districts, and self-help groups, cured TB patients, folk media and traditional healers in TB care and control activities
- Organized more than 30 000 community meetings and nearly 40 000 patient–provider meetings on TB control

Planned activities

- Enhance community involvement through community meetings, and collaboration with groups such as self-help groups, youth organizations, schoolchildren, local NGOs, faith-based organizations and Panchayat Raj Institutions
- Involve community volunteers and cured TB patients to provide motivation and support for TB patients
- Initiate TB care in the community

Patients' Charter

Achievements

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

Planned activities

- Print and widely disseminate the Patients' Charter among providers and patients
- Inform professional organizations and state governments about the Patients' Charter, and encourage its adoption
- Display the Patients' Charter in local languages at all major health-care facilities

RESEARCH, INCLUDING SPECIAL SURVEYS AND IMPACT MEASUREMENT

Achievements

- Initiated broad programme of operational research projects into strategies to improve access to diagnosis; methods of diagnosis, including diagnosis in children; efficacy of treatment regimens; TB diagnosis and control in remote settings; health-seeking behaviour; cost-effectiveness of PPM; and factors associated with default and relapse

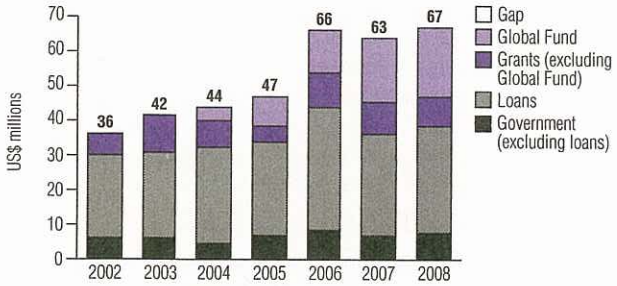
Planned activities

- Start subnational TB disease prevalence surveys at six sites, in addition to ongoing surveys at the TB Research Centre, Chennai
- Conduct second national ARTI survey
- Revise the operational research priorities of the programme and increase operational research activities in collaboration with medical colleges

FINANCING THE STOP TB STRATEGY

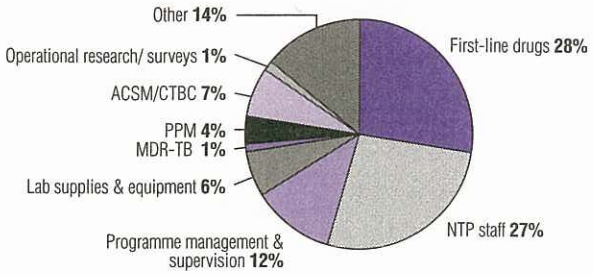
NTP budget by source of funding

Large increase in budget after 2005, which has been fully funded mainly by increasing funding from a World Bank loan and the Global Fund



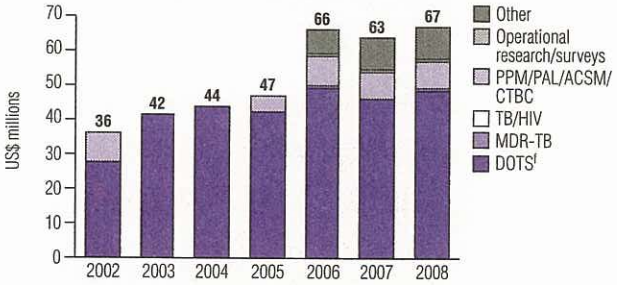
NTP budget by line item, 2008

65% of the budget is for component 1 of the Stop TB Strategy (DOTS expansion and enhancement); the budget for MDR-TB is small – plans for treatment of MDR-TB cover less than 1% of estimated cases



NTP budget by line item

DOTS continues to be a dominant component of the NTP budget, although amounts for other elements of the Stop TB Strategy, particularly PPM, have increased since 2005

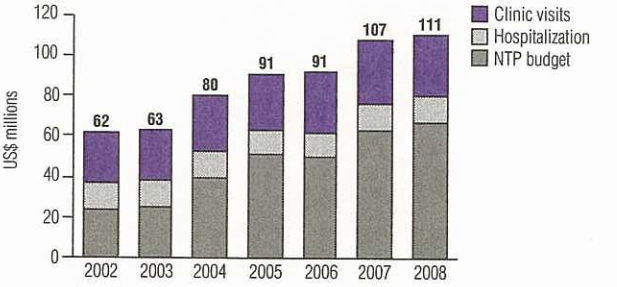


NTP funding gap by line item

No funding gaps have been reported for TB control since 2002

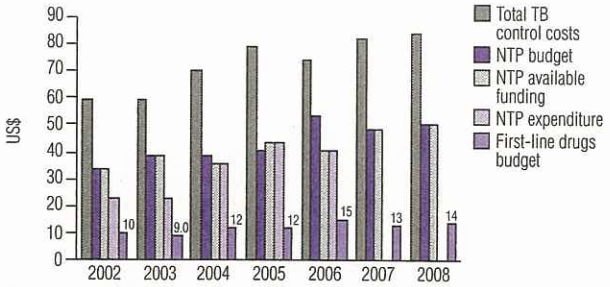
Total TB control costs by line item[5]

Hospitalization costs are for 11 750 dedicated TB beds, costs for clinic visits based on 75% patients using health facilities for DOT



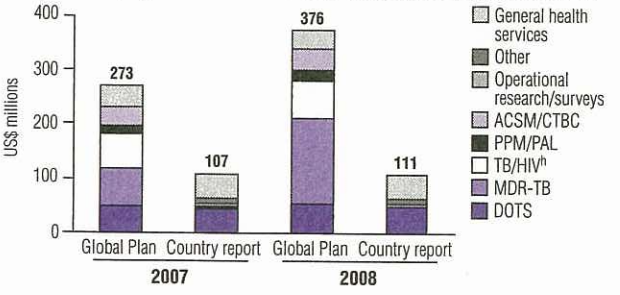
Per patient costs, budgets and expenditures[6]

Increasing cost per patient since 2002 as newer elements of TB control are introduced, but India remains the country with the lowest cost per patient treated among all HBCs



Comparison of country report and Global Plan:[9] total TB control costs, 2007–2008

Targets for MDR-TB patients to be treated in Global MDR/XDR Response Plan much higher than scaling up planned by NTP; NTP budget for TB/HIV small since most activities funded through HIV budgets; ACSM estimates in Global Plan used evidence from outside India



NTP budget and funding gap by Stop TB Strategy component

(US$ millions)	2007 BUDGET	2007 GAP	2008 BUDGET	2008 GAP
DOTS expansion and enhancement	46	0	48	0
TB/HIV, MDR-TB and other challenges	0.05	0	0.7	0
Health system strengthening	0	0	0	0
Engage all care providers	3.1	0	2.7	0
People with TB, and communities	4.6	0	4.6	0
Research	1.0	0	0.9	0
Other	9.0	0	9.5	0

Financial indicators for TB

Government contribution to NTP budget (including loans)	56%	58%
Government contribution to total cost TB control (including loans)	74%	74%
NTP budget funded	100%	100%
Per capita health financial indicators (US$)		
NTP budget per capita	0.1	0.1
Total costs for TB control per capita	0.1	0.1
Funding gap per capita	0	0
Government health expenditure per capita (2004)	5.4	
Total health expenditure per capita (2004)	31	

SOURCES, METHODS AND ABBREVIATIONS

[a–h] Please see footnotes page 169.

1 Incidence, prevalence and mortality estimates include patients infected with HIV. Estimate of ss+ incidence based on 3-year national tuberculin survey completed during 2003 (Chadha, VK. Tuberculosis epidemiology in India: a review. *International Journal of Tuberculosis and Lung Disease*, 2005, 9:1072–1082). Estimates of ss+ prevalence from Gopi PG et al. Estimation of burden of tuberculosis in India for the year 2000. *Indian Journal of Medical Research*, 2005, 122:243–248. WHO estimate of total prevalence of TB (458/100 000 pop in year 2000) is lower than that derived directly from survey (846/100 000 pop). Incidence rate assumed to be constant in absence of contrary evidence, but estimated prevalence and mortality rates decline with growing proportion of cases treated.

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 568/100 000 pop and mortality 42/100 000 pop/yr.

3 The population estimate used by the NTP is lower than that used here and gives a notification rate for new smear-positive cases of 50 per 100 000 population, and a smear-positive case detection rate of 66%.

4 For routine diagnosis, there should be at least one laboratory providing smear microscopy per 100 000 population. By 2009, the RNTCP plans to have established a network of at least 24 state-level accredited laboratories with quality-controlled culture and DST facilities in order to meet the requirements of the programme, including the routine management of MDR-TB.

5 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.

6 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.

Stop TB Partnership

SUMMARY SHEET		
Agenda Nr. 1.08-4.0B **INDIA**	Subject	**ROUNDTABLE WITH MINISTERS: COUNTRY REPORTS ON THE GLOBAL PLAN**
For Information ☐	For Discussion ☒	For Decision ☒

Rationale:

To inform the Coordinating Board on progress made and challenges faced by four countries - Afghanistan, India, South Africa and Tanzania, on the implementation of the Global Plan.

Summary:

Progress in India is important for global progress towards the Stop TB targets.

- India is implementing almost all of the components of the STOP TB strategy 2006, under the Revised National TB Control Program (RNTCP).
- DOTS has been expanded to the entire country since March 2006. Case detection is by quality assured sputum microscopy through a network of more than 12,500 designated microscopy centers. A systematic monitoring & supervision strategy is in place to ensure quality DOTS services.
- RNTCP has been consistently achieving 85% treatment success rate among new smear positive (NSP) TB patients and in 2007 RNTCP also achieved NSP case detection of 70%.
- A joint national framework for TB-HIV collaborative activities is being implemented across the country which focuses on service delivery linkages.
- A network of accredited C&DST laboratories is being established. So far 4 national reference laboratories and two accredited state level reference laboratories have been established. Another 11 laboratories are likely to be established by 2008 and another 13 by 2009. DOTS Plus services were initiated in 2007. To date >100 MDR patients have been put on treatment at two sites. DOTS-Plus services are to be scaled up in a phase manner by 2009-10.
- RNTCP has contributed to the strengthening of health system by upgrading laboratories, training health staff and the provision of additional manpower. RNTCP has also participated in efforts to improve the health system under the National Rural Health Mission.
- RNTCP developed special schemes to systematically involve all health care providers. Over 2900 NGOs, 17000 PPs, 260 medical colleges and over 150 corporate sector health units are implementing the program. RNTCP has collaborations with professional bodies and faith based organization which endorsed the ISTC.
- An effective RNTCP ACSM strategy is in place.
- RNTCP is implementing an operational research agenda. In addition, large scale impact assessment surveys are being undertaken. RNTCP is collaborating for demonstration of newer diagnostics (e.g liquid culture and Hains molecular assay) with FIND and for newer drugs with pharmaceuticals.

Challenges

- Scaling up lab services for Culture and DST.
- Ensuring uninterrupted supply of quality SLD.
- Counteracting negative media reports.
- Promoting rational use of SLD by the private sector.

Decisions requested (from the Stop TB Coordinating Board)

1. Streamline GLC mechanism for procurement and supply of SLDs to large programs like India as per their requirement, or permit procurement outside GLC mechanism with additional batch testing of drugs by GLC.
2. Additional technical assistance via WHO is required on laboratory strengthening and the introduction of molecular techniques such as Hains assay.
3. Stop TB Partnership's help is required in addressing negative media publicity.
4. Launch of an international campaign for rational use of SLDs would help India.

Implications (political/financial/staffing etc)**:**

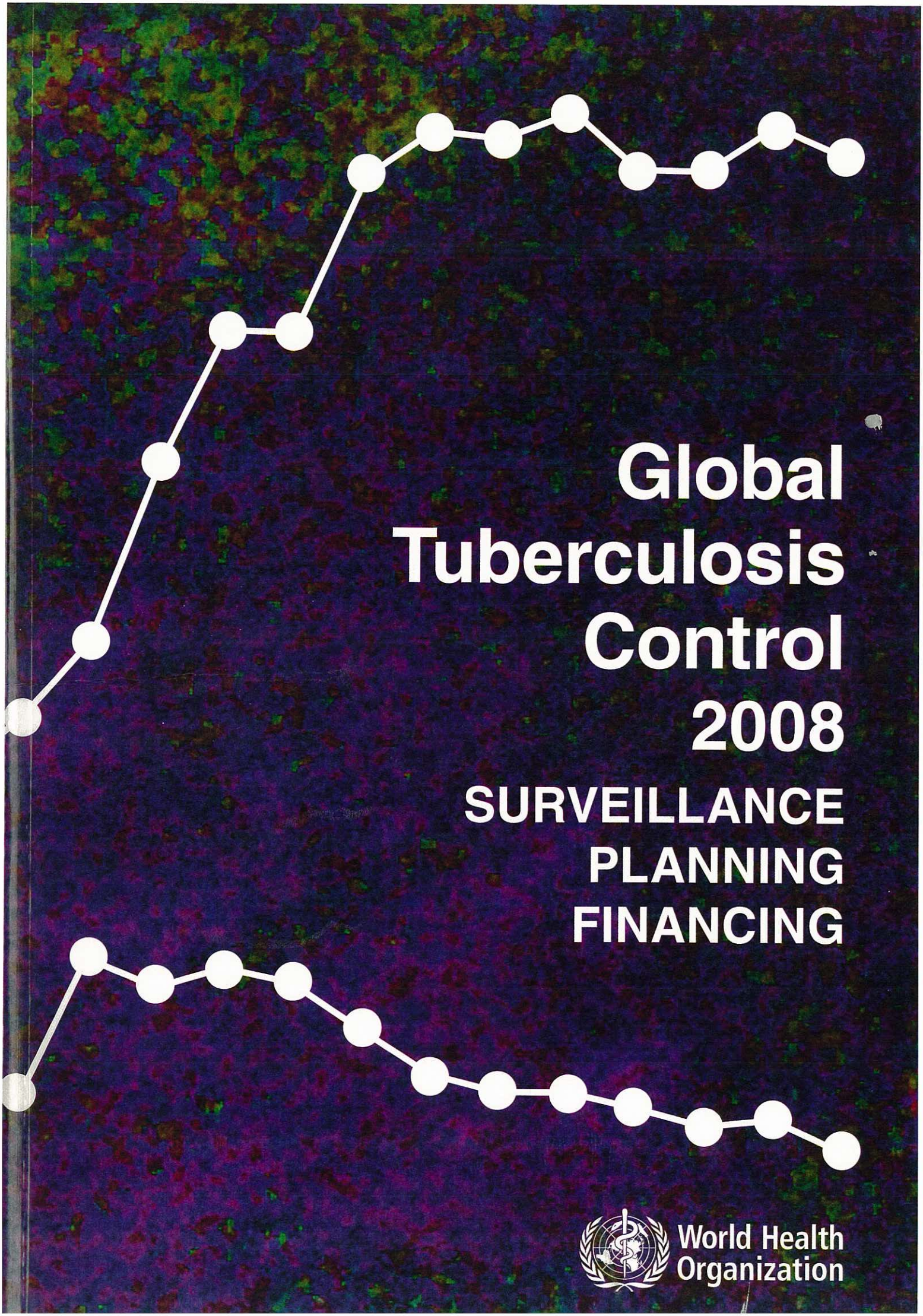
- None

NEXT STEPS

Action Required: N/A

Focal Point: N/A

Timeframe: N/A


Global
Tuberculosis
Control
2008
SURVEILLANCE
PLANNING
FINANCING
World Health
Organization