

7.1 African Region: summary of planned activities, impact and costs

Within the African Region there are two distinct epidemiological subregions in terms of TB and HIV burden. The high HIV prevalence subregion (AFR high) includes countries with an estimated adult HIV prevalence rate equal to or greater than 4%; the remaining countries constitute the low HIV prevalence subregion (AFR low).²⁶ The following section summarizes achievements to date, challenges, priority activities, and expected effects and costs for the African region, and highlights key differences between AFR high and AFR low. Summary tables and figures are presented separately for the two subregions.

Achievements to date

There has been good progress in DOTS expansion in the African Region in recent years. Nine of the world's 22 TB high-burden countries are in Africa, and all nine (Democratic Republic of Congo, Ethiopia, Kenya, Mozambique, Nigeria, South Africa, Uganda, United Republic of Tanzania and Zimbabwe) have a DOTS programme. Only five of the 46 countries in the region have not adopted DOTS as the national strategy for TB control, though some core elements of the strategy have not been adequately implemented in a few countries. Case detection increased steadily from 23% to 48% between 1995 and 2003, and is expected to reach 55% in 2005. Though short of the 70% target, this is a significant achievement given the severe health systems constraints in the region.

All nine TB high-burden countries in the African region fall in the AFR high subregion, and face particular challenges related to the HIV epidemic. Many countries with high HIV prevalence have established pilot projects for collaborative TB/HIV activities (e.g. Democratic Republic of Congo, Ethiopia, Rwanda, United Republic of Tanzania) or are already scaling up TB/HIV activities nationally (e.g. Kenya, Malawi, and South Africa).

Several countries have taken up community-based DOTS, and are now at various stages of programme implementation. Coverage of drug resistance surveillance is increasing. Kenya has a DOTS-Plus pilot approved by the Green Light Committee for DOTS-Plus. South Africa is one of the few high-burden countries in which the national TB programme provides treatment for multidrug-resistant TB (MDR-TB) cases. The programme, however, has not been endorsed by the Green Light Committee.

Challenges

Despite these achievements, TB control in the region faces severe challenges, of which the greatest is perhaps the impact of HIV on increasing TB incidence. However, a range of additional factors contributes to the uncontrolled epidemic, including widespread poverty and very weak health systems. Major constraints on the delivery of quality care include: inadequate infrastructure, poor access to health facilities, insufficient staffing and human resource development, insufficient and substandard laboratory services, and limited links between national TB programmes and HIV programmes, as well as with other public and private health care providers.

The treatment success rate has remained more or less unchanged since 1998 at just above 70%, considerably short of the 85% target. This low rate is due not only to the high rates of death among people living with HIV/AIDS but also to high rates of treatment interruption and transfer. Efforts are needed specifically to improve treatment and care for HIV-positive TB patients, generally to improve case management, referral and transfer mechanisms, and defaulter tracing, and to improve TB diagnosis (that will also help improve the case detection rate).

Drug resistance surveillance data are limited and few trends are available from the African Region. This is of particular concern given that little information is available about MDR-TB in high HIV-prevalence settings.

Priority activities 2006–2015

Ministers of Health from 46 Member States of the Africa Region unanimously declared TB an emergency in the Region in August 2005. The declaration urged countries to develop and implement, with immediate effect, emergency strategies and plans to control the worsening of the epidemic. This declaration of emergency will be crucial in accelerating the implementation of priority activities and in garnering the necessary commitments from all stakeholders, both nationally and internationally.

The first priority is to move from basic geographical coverage of DOTS, to improved quality and access. Quality improvements require intensified efforts to strengthen laboratory services, treatment management, and supervision. This, in turn, requires that the root problems of the human resource crisis and weak health systems are addressed (see Section 3.2). Advocacy for higher and sustained political commitment at national and international level will be key. Tackling the human resource crisis goes far beyond TB control alone, and will require the implementation of human resource development strategies in the public health sector, e.g. more attractive career and salary structures, and improved training, as well as the establishment of partnerships with communities and all health care providers, in order to tap all available human.

Implementation of collaborative TB/HIV activities is another priority in the region, in particular in the high HIV prevalence countries. TB/HIV collaborative activities will have begun in all high HIV prevalence countries by 2007, with full coverage by 2010.

Access will be improved by further decentralizing services. For the majority of the population living in rural areas, establishing and scaling up community-based DOTS will improve access to quality care, particularly for the most disadvantaged, and will also address some gender-related barriers to access (see Section 3.5). Through social mobilization, communities participate in treatment support and contribute to identifying TB suspects and referring them for diagnosis. The public-private mix DOTS (PPM DOTS) approach will be relevant mainly in urban settings, where it will contribute to making DOTS services available to vulnerable urban populations, such as slum dwellers and migrants. It will also facilitate links between large central hospitals and public health facilities in the cities. The Practical Approach to Lung

Health (PAL) will be introduced gradually in settings with sound DOTS programmes in place.

Rapid introduction and scale-up of culture services, especially new rapid culture methods, is particularly important to improve diagnosis of sputum smear-negative and extrapulmonary TB among people living with HIV/AIDS. Drug resistance surveillance will be expanded and the relationship between HIV and MDR-TB will be monitored. Diagnosis and treatment of MDR-TB will be pilot tested and scaled up, and will focus on previously treated patients.

Better coordination between TB programmes, anti-poverty initiatives and health system strengthening is needed to ensure that TB treatment is accessible to all socioeconomic groups (but most importantly to the poor), and to women and men equally. Debt relief for highly indebted poor countries (HIPC) could contribute to ensuring universal access to quality TB care by freeing up domestic resources. However, the Poverty Reduction Strategy Papers (PRSP), Medium Term Expenditure Frameworks (MTEF), Poverty Reduction Support Credits (PRSCs) and other broad planning mechanisms, such as Sector-Wide Approaches (SWAps), hold the potential for addressing constraints and placing financing for TB in a sustainable and flexible long-term strategic plan, with multisectoral involvement. The establishment of National Stop TB Partnerships will be encouraged to forge multisectoral involvement and coordination.

Expected effects and costs

Successful implementation of the activities described above is expected to increase case detection to over 70% by 2010 and over 80% by 2015. Treatment success rate should reach the target of 85% by 2010 and be sustained at this level. If this proves to be the case, it is predicted that the MDG target, to have halted and begun to reverse the incidence of TB by 2015, will be met. However, achievement of the Partnership's other TB targets for 2015 – to halve prevalence and death rate – will be reached later in the African region. An important reason is that the targets were set with 1990 levels as baseline. Since there was a dramatic increase in TB incidence, prevalence and death rates between 1990 and 2005, the time remaining until 2015 is almost certainly too short to revert to 1990 levels.

For AFR high, it is estimated that about 14 million people will be treated in DOTS programmes and 18 000 in DOTS-Plus. In addition, 2.6 million TB patients will be enrolled on antiretroviral therapy (ART). The combined effect of all interventions will be to prevent about 3.8 millions deaths, in comparison with a situation in which no DOTS programmes are implemented, or about 1.9 millions deaths, in comparison with a situation in which TB control efforts are sustained at 2005 levels.

For AFR low, it is estimated that about 2.9 million people will be treated in DOTS programmes and 11 000 in DOTS-Plus. In addition, almost 140 000 TB patients will be enrolled on ART. The combined effect of all interventions will be to prevent about 600 000 deaths, in comparison with a situation in which no DOTS programmes are implemented, and about 160 000 deaths,

in comparison with a situation in which TB control efforts are sustained at 2005 levels.

The estimated total cost of DOTS Expansion, DOTS-Plus and TB/HIV control activities in the African region from 2006 to 2015 is US\$18.3 billion, of which US\$15.1 billion is needed for countries with high HIV prevalence and US\$ 3.2 billion for countries with low HIV prevalence.

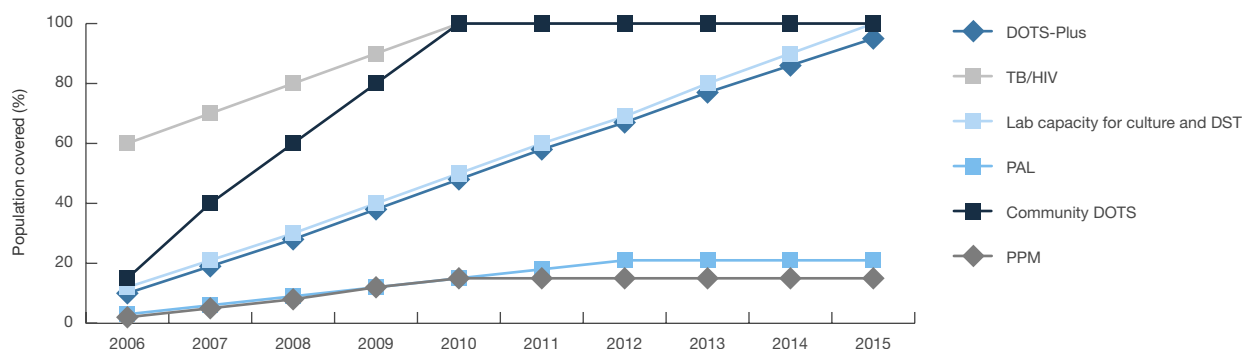
TABLE 5: COST OF PLANNED TB CONTROL ACTIVITIES AFRICAN REGION 2006–2015

Planned activities	High HIV countries US\$ millions	Low HIV countries US\$ millions	Total US\$ millions
DOTS expansion and quality	10,419 (69%)	2,859 (89%)	13,278 (72%)
DOTS-Plus	45 (1%)	26 (1%)	71 (1%)
TB/HIV collaborative activities	4,605 (30%)	334 (11%)	4,940 (27%)
TOTAL	15,070 (100%)	3,219 (100%)	18,289 (100%)

SUMMARY CHARTS FOR AFRICAN COUNTRIES WITH HIGH HIV PREVALENCE

FIGURE 17: PLANNED SCALE UP OF ACTIVITIES 2006–2015

African countries with high HIV prevalence



N.B. Population coverage is the percentage of the population that lives in an area where the activity is implemented. For TB/HIV collaborative activities, the percentage refers to the proportion of the eligible population, i.e. the population living in areas with an HIV prevalence above 1%. For DOTS-Plus, it is the percentage of detected MDR-TB cases that are enrolled in DOTS-Plus programmes.

TABLE 6: MILESTONES RELATED TO IMPLEMENTATION OF DOTS EXPANSION, DOTS-PLUS AND TB/HIV ACTIVITIES (a)

African countries with high HIV prevalence	2006 (b)	2010 (b)	2015 (b)
DOTS EXPANSION			
DOTS coverage	100%	100%	100%
Total number of new ss+ patients treated in DOTS programmes (thousands)	437 (673)	504 (650)	524 (629)
Case detection rate new ss+ (%)	65%	77%	83%
Treatment success rate new ss+ (%)	75%	85%	86%
Total number of new ss-/extra-pulmonary patients treated in DOTS programmes (thousands)	833 (1249)	952 (1188)	990 (1162)
Percentage of new ss-/extra-pulmonary patients treated in DOTS programmes	67%	80%	85%
DOTS-Plus			
Total number of detected MDR-TB patients treated in DOTS-Plus programmes (thousands)	0.2 (2.3)	1.5 (3.1)	3.3 (3.3)
Percentage of detected MDR-TB cases treated in DOTS-Plus programmes	10%	50%	100%
MDR-TB treatment success rate (%)	71%	73%	75%
Percentage of culture positive cases that are re-treatment cases	15%	12%	10%
TB/HIV			
Total number of PLWHA attending HIV services screened for TB (millions) (c)	9.9 (16)	18 (18)	21 (21)
Percentage of PLWHA attending HIV services screened for TB (d)	63%	100%	100%
Total number of newly diagnosed and eligible PLWHA offered IPT (millions)	1.0 (24)	2.1 (28)	2.4 (30)
Percentage of PLWHA offered IPT	4%	8%	8%
Total number of TB patients in DOTS programmes HIV tested and counselled (millions)	0.6 (1.3)	1.2 (1.5)	1.3 (1.5)
Percentage of TB patients treated in DOTS programmes HIV tested and counselled	51%	85%	85%
Total number of TB patients (HIV positive and eligible) in DOTS programmes enrolled on ART (millions)	0.2 (0.4)	0.3 (0.5)	0.3 (0.5)
Percentage of TB patients (HIV positive and eligible) in DOTS programmes enrolled on ART	45%	55%	59%

(a) The percentages are not always exactly the numerator divided by the denominator due to rounding errors.

(b) Numbers in parentheses indicate the denominator. For DOTS Expansion it is new TB cases.

For DOTS-Plus it is the total number of detected MDR-TB cases.

For PLWHA screened for TB it is the total number of PLWHA attending HIV services. For PLWHA offered IPT it is the total number of PLWHA.

For TB patients HIV tested and counselled it is the total number of TB patients treated under DOTS in areas covered by TB/HIV collaborative activities.

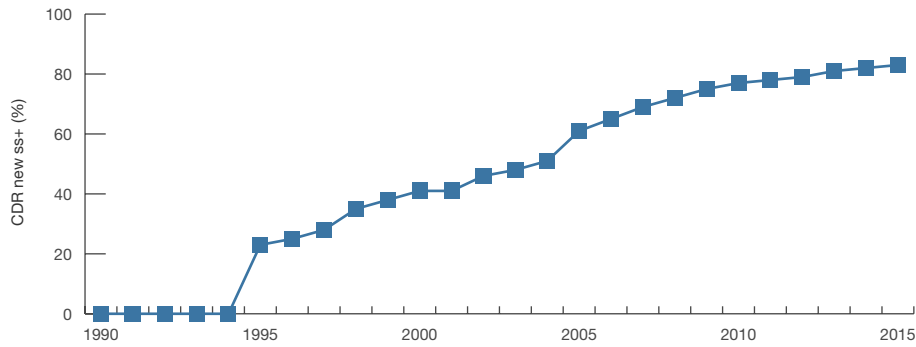
For TB patients enrolled on ART it is the total number of HIV positive TB patients in DOTS programmes that are eligible for ART in areas covered by TB/HIV collaborative activities.

(c) Please note that unlike for other Regions, for AFR high HIV prevalence the numbers for TB/HIV activities are presented in millions as opposed to thousands.

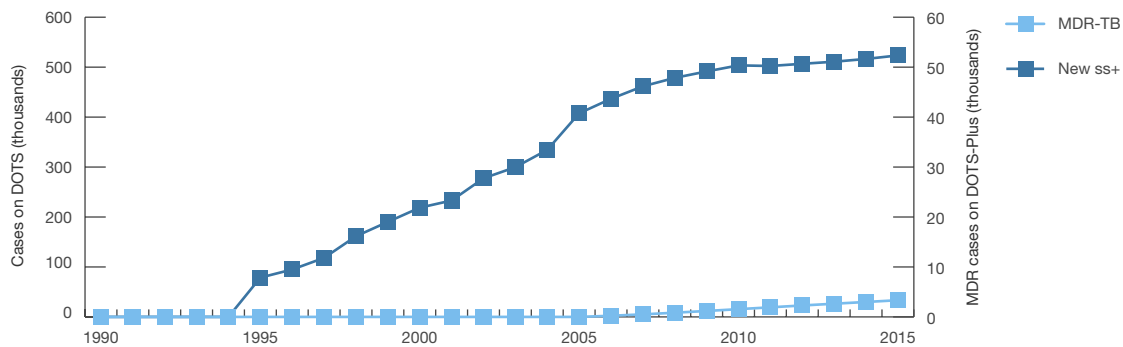
(d) HIV services include testing and counselling and HIV treatment and care services

FIGURE 18: ESTIMATED IMPACT AND COSTS OF PLANNED INTENSIFIED ACTIVITIES 2006–2015

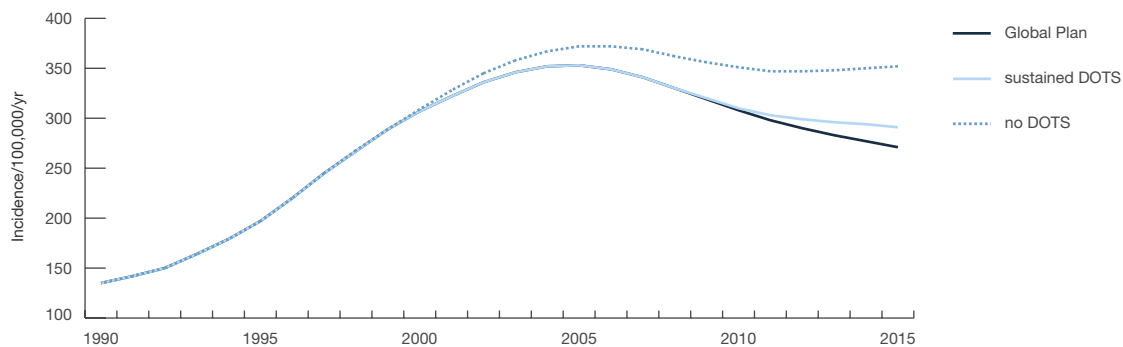
African countries with high HIV prevalence: Case detection rate, new ss+ cases



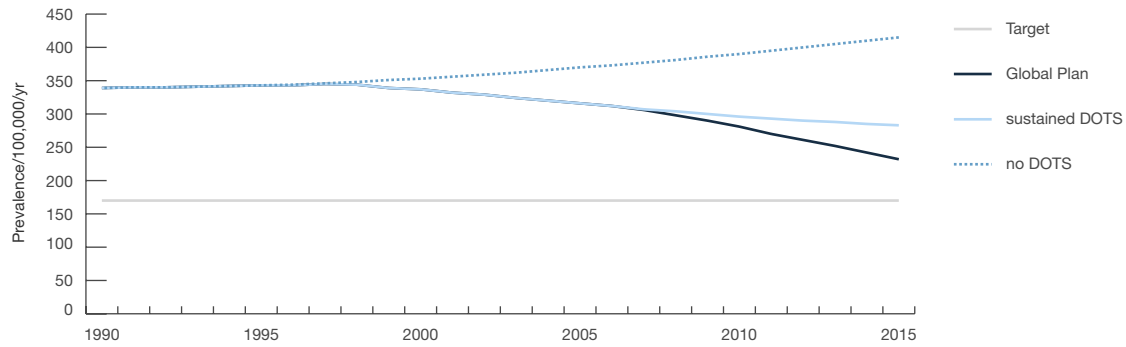
African countries with high HIV prevalence: Number of cases treated under DOTS/DOTS-Plus



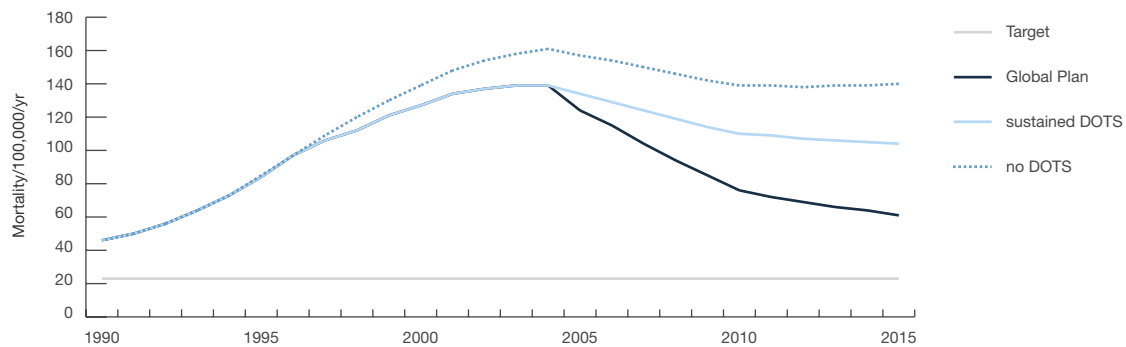
African countries with high HIV prevalence: Incidence



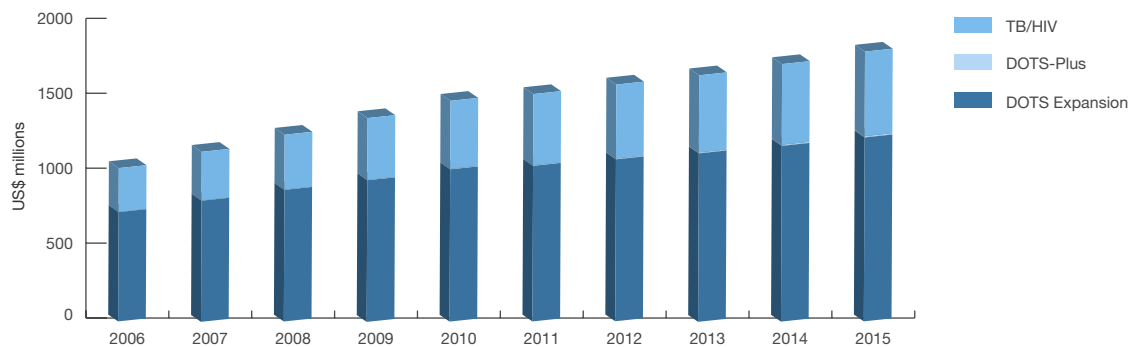
African countries with high HIV prevalence: Prevalence



African countries with high HIV prevalence: Mortality



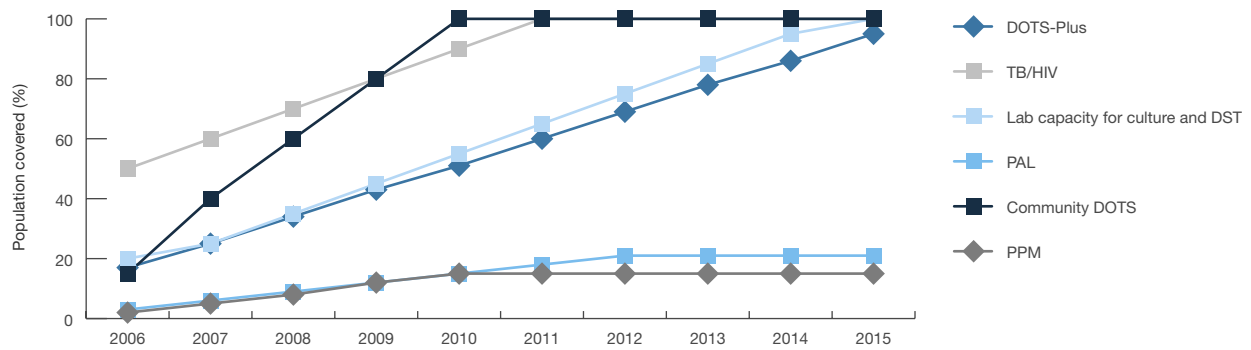
African countries with high HIV prevalence: Total costs



SUMMARY CHARTS FOR AFRICAN COUNTRIES WITH LOW HIV PREVALENCE

FIGURE 19: PLANNED SCALE UP OF ACTIVITIES 2006-2015

African countries with low HIV prevalence



N.B. Population coverage is the percentage of the population that lives in an area where the activity is implemented. For TB/HIV collaborative activities the percentage refers to the proportion of the eligible population, i.e. the population living in areas with an HIV prevalence above 1%. For DOTS-Plus, it is the percentage of detected MDR-TB cases that are enrolled in DOTS-Plus programmes.

TABLE 7: MILESTONES RELATED TO IMPLEMENTATION OF DOTS EXPANSION, DOTS-PLUS AND TB/HIV ACTIVITIES (a)

African countries with low HIV prevalence	2006 (b)	2010 (b)	2015 (b)
DOTS EXPANSION			
DOTS coverage	100%	100%	100%
Total number of new ss+ patients treated in DOTS programmes (thousands)	107 (169)	126 (177)	127 (159)
Case detection rate new ss+ (%)	60%	71%	80%
Treatment success rate new ss+ (%)	77%	85%	86%
Total number of new ss-/extra-pulmonary patients treated in DOTS programmes (thousands)	147 (241)	175 (243)	181 (226)
Percentage of new ss-/extra-pulmonary patients treated in DOTS programmes	61%	72%	80%
DOTS-Plus			
Total number of detected MDR-TB patients treated in DOTS-Plus programmes (thousands)	0.2 (0.9)	0.9 (1.7)	2.1 (2.1)
Percentage of detected MDR-TB cases treated in DOTS-Plus programmes	17%	54%	100%
MDR-TB treatment success rate (%)	71%	73%	75%
Percentage of culture positive cases that are re-treatment cases	10%	8%	6%
TB/HIV			
Total number of PLWHA attending HIV services screened for TB (thousands)	693 (1,316)	1,522 (1,671)	2,095 (2,095)
Percentage of PLWHA attending HIV services screened for TB (c)	53%	91%	100%
Total number of newly diagnosed and eligible PLWHA offered IPT (thousands)	63 (2,734)	162 (3,271)	197 (4,116)
Percentage of PLWHA offered IPT	2%	5%	5%
Total number of TB patients in DOTS programmes HIV tested and counselled (thousands)	89 (210)	191 (250)	217 (255)
Percentage of TB patients treated in DOTS programmes HIV tested and counselled	43%	77%	85%
Total number of TB patients (HIV positive and eligible) in DOTS programmes enrolled on ART (thousands)	8 (17)	14 (24)	18 (31)
Percentage of TB patients (HIV positive and eligible) in DOTS programmes enrolled on ART	44%	55%	60%

(a) The percentages are not always exactly the numerator divided by the denominator due to rounding errors.

(b) Numbers in parentheses indicate the denominator. For DOTS Expansion it is new TB cases.

For DOTS-Plus it is the total number of detected MDR-TB cases.

For PLWHA screened for TB it is the total number of PLWHA attending HIV services. For PLWHA offered IPT it is the total number of PLWHA.

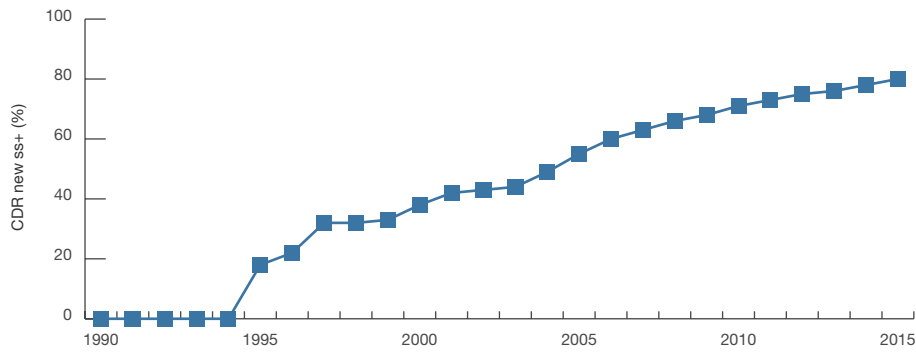
For TB patients HIV tested and counselled it is the total number of TB patients treated under DOTS in areas covered by TB/HIV collaborative activities.

For TB patients enrolled on ART it is the total number of HIV positive TB patients in DOTS programmes that are eligible for ART in areas covered by TB/HIV collaborative activities.

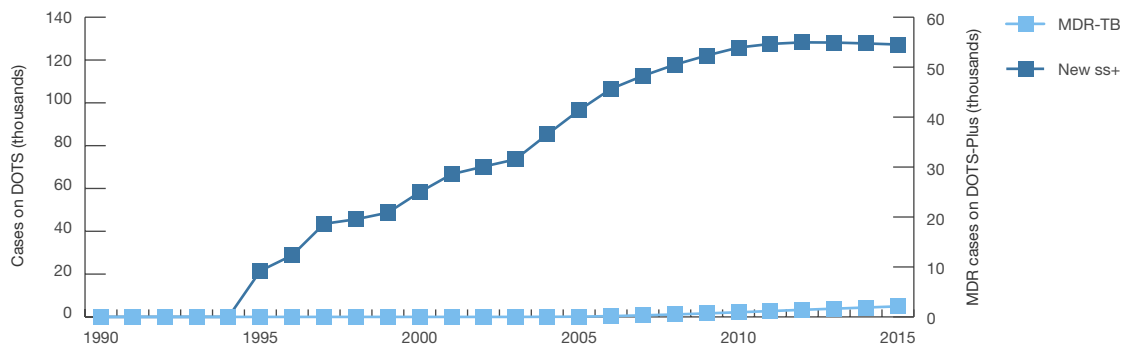
(c) HIV services include testing and counselling and HIV treatment and care services.

FIGURE 20: ESTIMATED IMPACT AND COSTS OF PLANNED INTENSIFIED ACTIVITIES 2006–2015

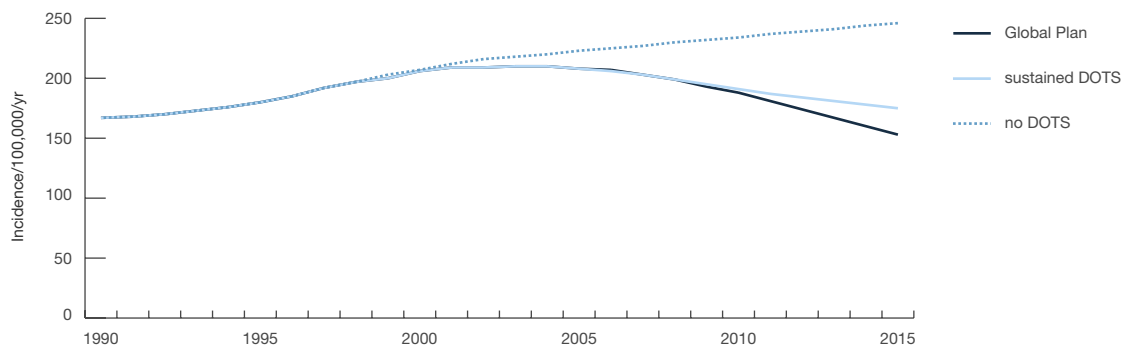
African countries with low HIV prevalence: Case detection rate, new ss+ cases



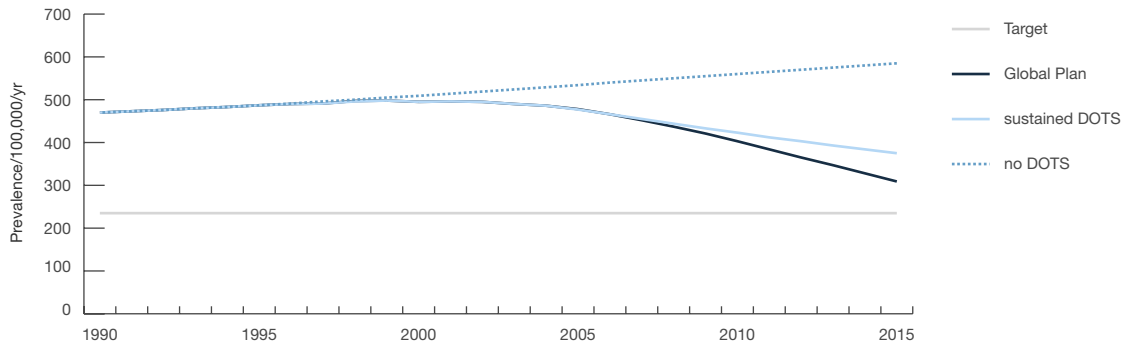
African countries with low HIV prevalence: Number of cases treated under DOTS/DOTS-Plus



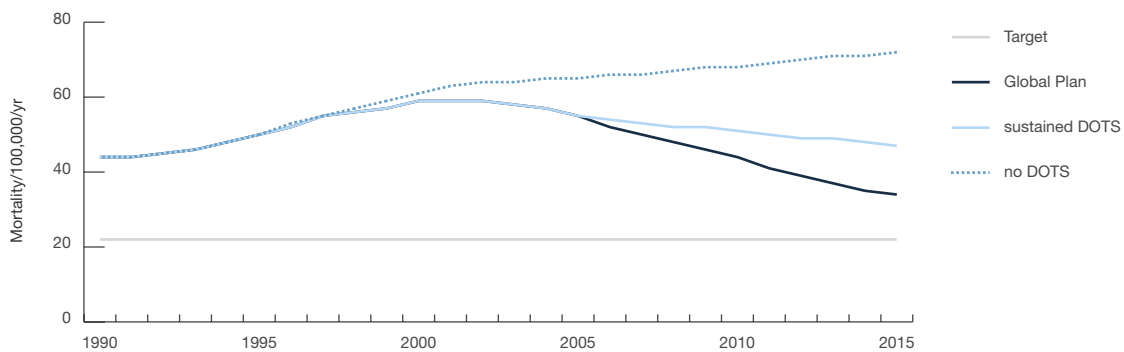
African countries with low HIV prevalence: Incidence



African countries with low HIV prevalence: Prevalence



African countries with low HIV prevalence: Mortality



African countries with low HIV prevalence: Total costs

