



DRUG-RESISTANT TUBERCULOSIS

A focus for collaborative regional leadership

Success in stabilising the global tuberculosis (TB) epidemic is threatened by the emergence and spread of drug-resistant (DR) strains, resistant to the drugs that are usually effective against drug-sensitive (DS) strains.

In 2009, the World Health Assembly declared DR-TB a “global public health threat” but the global response has been inadequate so far.

DR-TB is arguably the most daunting health challenge currently facing the Asia-Pacific region. It needs to be addressed before it overwhelms health systems, as happened in some former regions of the Soviet Union and southern African countries where epidemic spread is occurring.

We call upon the Australian Government to facilitate a coordinated response by:

- **Mobilising regional political commitment and resources.**
- **Convening a high-level roundtable meeting to develop a coordinated strategic response.**

Such an investment serves the most vulnerable populations, while promoting stability, economic growth and sustainable development in our region.

GLOBAL TB FACTS IN 2013

8.6 MILLION
new cases per year

1.1 MILLION
people with **HIV**

2.9 MILLION
women

66% are
actually
diagnosed

Drug-Resistant TB
and **HIV/TB** co-infection
are key drivers of the TB epidemic

Asia-Pacific has **58%**
of the global burden of TB
and **54%** of DR-TB

450,000
new cases
of **DR-TB**
but only
21% were
diagnosed

The funding gap to be filled by
international donors is
\$3 BILLION per year



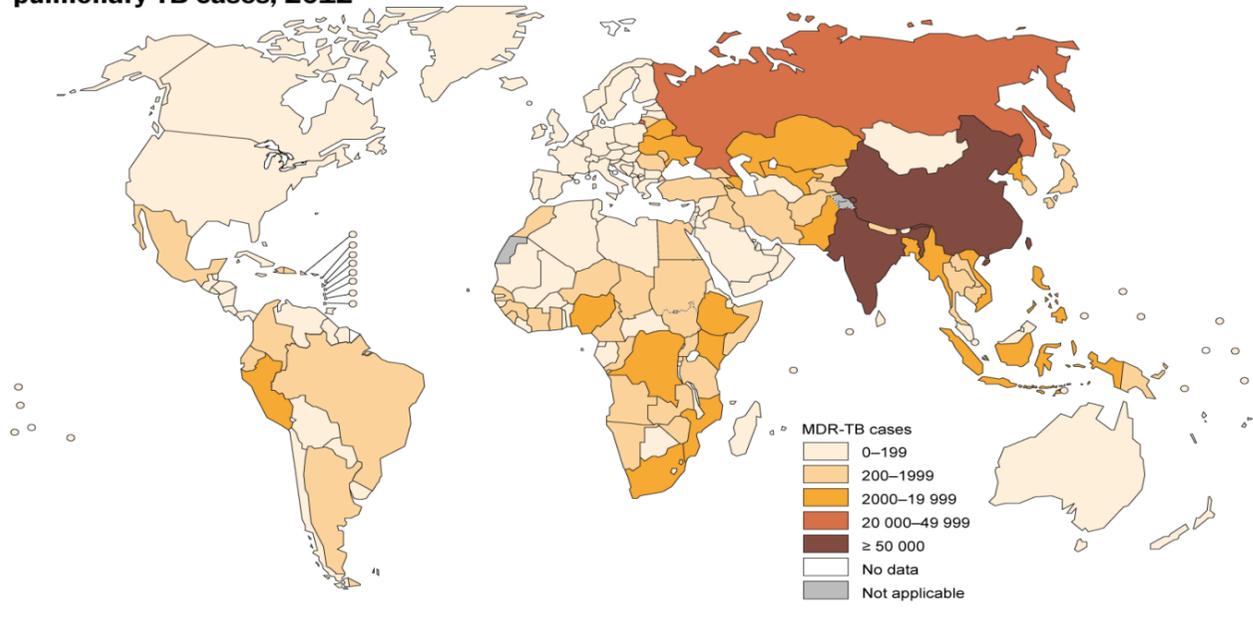
What is tuberculosis (TB)?

TB is an airborne infectious disease caused by the bacteria *Mycobacterium tuberculosis*.

It typically affects the lungs and is spread in the air when a person who is sick with TB expels the bacterium in tiny drops of fluid, for example by coughing. Nearby people may inhale the droplets into their lungs. Left untreated, it is estimated that each person with active pulmonary TB will infect between 10 and 15 people every year.

TB is a treatable and curable disease which disproportionately impacts low-middle income countries, where 94 per cent of TB cases and 98 per cent of TB deaths occur. Disease control efforts focus on finding and effectively treating infectious cases as early as possible, to prevent further spread of the disease.

Number of multidrug-resistant tuberculosis cases estimated to occur among notified pulmonary TB cases, 2012



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Data Source: *Global Tuberculosis Report 2013*. WHO, 2013.
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What is drug-resistant TB (DR-TB)?

MDR-TB - Multidrug-resistant TB: resistance to the most effective first line drugs.

XDR-TB - Extensively drug-resistant TB: resistance to the most effective first and second line drugs. This heralds the prospect of virtually untreatable disease.



Why address DR-TB as an urgent issue?

Cases are increasing and spreading.

The number of people living with MDR-TB has risen from an estimated 440,000 in 2008 to 680,000 in 2012 and strikingly, over 80 per cent are not even diagnosed, and therefore never treated. These factors lead to sustained community transmission from people with undiagnosed, untreated, infectious DR-TB.

Our current capacity to address DR-TB is limited. The increase in DR-TB is linked to broader health system deficiencies and limited tools to manage it.

The major challenges are:

- Lack of political commitment.** Bold and innovative political leadership is needed.
- Inadequate funding for TB.** The estimated funding gap is \$3 billion in each of the next two years.
- Lack of availability of tools to diagnose and treat DR-TB.** Promising new tests are emerging, such as Xpert MTB/RIF, a genetic test that diagnoses MDR-TB in two hours and is being rolled out globally. New drugs and treatment regimens are in late-stage development. A new vaccine is needed to eliminate TB, including stopping the spread of DR-TB. Investment in this pipeline will have substantial, near-term health and economic benefits.
- Gaps in our understanding of the basic science of TB.** This requires investment in research. However, in 2012, international funding for TB research dropped by \$30.4 million, largely due to pullbacks from the private sector.

How can DR-TB in the region be addressed?

From crisis to opportunity.

The majority of governments in the Asia-Pacific region have limited capacity to mitigate the imminent threat of DR-TB.

Investment and coordinated action from both governments and business enterprises within this region is required urgently to avert this regional threat. Australia has an opportunity to demonstrate regional leadership by serving a pivotal coordinating function.



How can DR-TB in the region be addressed?

The benefits for Australia of addressing the regional DR-TB threat include:

- 1. It contributes to maintaining Australia's health security.** TB and DR-TB have no respect for our borders. The latent (or dormant) nature of the infection means that it cannot be effectively controlled by pre- and/or post-migration screening alone. The most effective way to protect Australia is to contribute to disease control in those high disease burden countries with which we have trade, migration, tourism and other travel links.
- 2. Investing in TB and DR-TB is highly cost-effective.** Evidence indicates that scaling-up current DR-TB treatment programs is a cost-effective intervention as treatment is the most effective way to prevent spread and new infections. DR-TB regimens in development are expected to lower the cost of DR treatment for some patients by 90 per cent, reduce treatment duration by 75 per cent, and deliver an all-oral therapy, simplifying treatment delivery and making MDR-TB treatment scalable for the first time.
- 3. It provides an opportunity to engage in private-public partnerships across a range of sectors.** For example, industry (mining, resources), pharmaceutical, biomedical and technology (e.g. mobile phones for m-health).

What are the risks of inaction?

DR-TB will continue to spread if no new action is taken.

Economic Costs. Besides the human cost, TB in general, and DR-TB in particular, place an extraordinary economic burden on communities and traps people in poverty. It is estimated TB will rob the world's poorest countries of an estimated USD \$1 to \$3 trillion over the next 10 years. The World Bank estimates that the loss of productivity attributable to TB is 4 to 7 per cent of some countries' GDP.

Health security risks. XDR-TB, which is virtually untreatable in many cases, has now been reported in 92 countries, including Australia. Currently, 85% of TB cases notified in Australia are persons born overseas. Hence, we have a strong biosecurity stake in the control of DR-TB in our regional neighbours.

Failure to specifically address DR-TB will result in major long-term human and economic costs and, ultimately, may pose a major threat to regional development and security.

What is the proposed course of action?

The appropriate course of action requires careful consideration, but the global challenge posed by DR-TB presents an urgent opportunity for Australia to play a highly constructive and visible regional and global leadership role.

We propose the following:

- **Prioritise control of TB and DR-TB** as an issue of key regional strategic importance. Continue important investment in the development of innovative vaccines, diagnostics, and treatment regimens for DS and DR-TB whilst supporting urgent scale up and implementation of treatment programs. Innovative regional financing options and drug quality mechanisms should be explored.
- **Convene a high-level roundtable meeting**, involving the Department of Foreign Affairs and Trade, global academic experts, relevant professional bodies, and leading NGOs who have expertise in policy development, TB research and development, and financing, to develop a coordinated strategic response.
- **Engender political commitment at the highest level in the region** (such as the East Asian Summit or ASEAN).