

into effect on 1 May, 2008. The index incorporates data on how complete the cities' disclosures are, whether they are timely, what measures have been taken in response and whether the disclosures are user-friendly. The potential maximum score is 100. However, the average score for 2008 was only 30, and just four cities scored more than 60.

The two NGOs hope that the ranking will pressure local governments to recognize and be more responsive to the kind of situation that developed in Yangzong Lake in southern China. From 2001 to 2008, the lake — which supplied drinking water for 26,000 people — was polluted with arsenic by a chemical company, despite fines and promises of action from local officials.

The index is also intended to make role models out of the best-performing local governments. In each of eight categories, the IPE designated a top scorer. Taken together, they form a 'dream team' that scored 89.5 points. "This shows that a high level of information disclosure is possible in China," says Wang Jingjing at the IPE.

The system has limitations, however. It can only report on cases already recognized in official documents. That is not often an issue,

says Wang, and an official source is usually available when the IPE hears of a complaint. But the group has no authority to push for further investigation if information is not available. Only 89 of 113 local environmental protection offices returned their calls.

A deeper problem is that the environmental laws themselves are not clear on crucial issues such as penalties for non-compliance. And in any case, the bar is pretty low. For example, Beijing ranks as one of the most transparent cities on the list, even though allegations that officials were manipulating data ahead of the Olympics have been met with denial, and little in terms of explanation (see *Nature* doi:10.1038/news.2009.578; 2009).

Although it is easy to be sceptical, local newspapers are paying attention to the index. In a face-saving society, local bureaucrats might now have to explain why they are at the bottom of the list. "The first thing to do is encourage public participation," says Wang. "But to do that people have to know what is happening."

The effort will also give central and local lawmakers a better idea of what is happening, and enable them to see whether laws need to be changed to ensure that China can make good on its intentions. ■

## Orphan giant

Strong advocacy is needed if progress is to be made against tuberculosis.

It was difficult to avoid a sense of despair after last week's Pacific Health Summit, in Seattle, Washington. The meeting — an annual gathering of researchers, public-health policy-makers, drug regulators and heads of non-governmental organizations, industry and funding institutions — was focused this year on tuberculosis (TB). As presentation followed presentation, the overwhelming scale of the challenge became all too evident. The global economic downturn is exacerbating both the burden of the disease and the obstacles to finding resources to cope with it.

About one-third of the world's population carries the bacterium that causes TB, *Mycobacterium tuberculosis*, and roughly 10% of these people will go on to develop the disease. Because drug courses can last for a year or more, most people do not complete their treatment, and the growth of resistance is therefore inevitable. Strains of *M. tuberculosis* are now appearing that are resistant not just to the front-line drugs used in initial treatment but also to the second-line drugs used to treat people who have become resistant, as in the case of the 'extensively drug-resistant tuberculosis' first recognized in 2005. As a recent review article dauntingly but appropriately put it, responding to the issue of resistance requires "a comprehensive approach incorporating innovation from the political, social, economic and scientific realms" (M. Jassal and W. R. Bishai *Lancet Infect. Dis.* **9**, 19-30; 2009).

Happily, there are some signs of progress. The World Health Organization points out that existing drugs and diagnostics can still make a difference if applied properly. And major improvements in tackling the disease would come from a more joined-up approach with the diagnosis and treatment of HIV/AIDS, which often occurs together with TB.

Unhappily, many of these measures require trained staff, well-designed buildings and procedures that minimize the spread of infection — resources that simply aren't available in many regions of the world.

Despite donations of vaccines by industry, price-tiering in poorer regions, progress in clinical trials, advanced market-commitment mechanisms and increases in research funding by organizations such as the US National Institutes of Health, the scale of funding remains dwarfed by the challenges. What progress has been made in research simply clarifies just how inadequate our knowledge is. Researchers have only a basic understanding of how the bacterium affects the various parts of the body, and the heterogeneity of its make-up and behaviour is reflected in the spectrum of progressions from infection to active TB. Furthermore, little is known about how the human body responds to *M. tuberculosis* infection and the bacterium can mutate up to a thousand times faster as it adapts to antibiotic attack and other stressors.

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As Anthony Fauci, head of the US National Institute of Allergy and Infectious Diseases in Bethesda, Maryland, stated at the meeting in his overview of the science, generations of advances in research and technology have bypassed TB research. That is beginning to change, but the timescale involved from research to the rolling out of new drugs and biomarkers is alarmingly large given the immediacy of the threats and the complexity of the organism.

Why hasn't more progress been made? According to Margaret Chan, head of the World Health Organization, the field has been too isolated and inward-looking, and needs to learn lessons from the approach to HIV/AIDS by reaching out and finding highly effective champions. Easily said. But the nine million people who develop active TB every year could only agree that the need to capture the world's imagination and support is urgent. ■