

A CHINA ENVIRONMENTAL HEALTH PROJECT RESEARCH BRIEF

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Child Mortality and Water Pollution in China: Achieving Millennium Development Goal 4

China is a country of contradictions. Its 27 years of economic boom have brought 400 million people out of poverty and created large urban centers bustling with trade. Many Chinese urbanites live in very comfortable conditions. Yet, in much the countryside, poverty rates of rural citizens remain high, for farmers are increasingly losing out in China's economic reforms. According to an October 2006 Gallup WorldPoll, between 2004 and 2006 the incomes of urban dwellers rose by an average of 4,000 Yuan while rural residents saw an increase of only 3,300 Yuan. This gap has led to significant challenges in equal access to a clean environment. For example, 94 percent of urban residents claim to have running water in their homes—a luxury that only 47 percent of rural residents say they possess.¹ Environmental degradation and pollution are two serious factors that exacerbate poverty in China's countryside, while also threatening the health of vulnerable rural populations, particularly children.

The Chinese government has increasingly prioritized investment to alleviate rural poverty issues, launching various rural development campaigns and increasing investment into rural infrastructure in its five-year plans. In 2006, China budgeted 50 billion Yuan for rural construction, targeting water, roads and schools.² In May 2007, the central government promised to give allowances to all needy rural dwellers in an effort to shrink the poverty gap between rural and urban citizens.³ China also joined all the other UN members in signing the United Nations Millennium Development Goals (MDGs) that aim to cut poverty in half by 2015, from 1990 rates. There are eight goals: (1) eradicate extreme poverty and hunger, (2) provide universal primary education, (3) promote gender equality and empower women, (4) reduce child mortality, (5) improve maternal health, (6) combat HIV/AIDS and other infectious diseases, (7) ensure environmental sustainability, and (8) develop a global partnership for development.⁴ Each individual goal has one or more targets associated with it, providing indicators for success.

According to the 2005 *China's Progress to the Millennium Development Goals Report* released by China's Ministry of Foreign Affairs and the United Nations in China, the country "will probably achieve" most of the goals by 2015.⁵ However, when one examines the current progress towards individual goals, the situation is more complex. Particularly striking are China's efforts to meet MDG 4, which aims for a two-third reduction of the under-age-five mortality rate between 1990 and 2015.

China's Progress on MDG 4

China's under-five child mortality rate was 27 (out of 1,000 live births) in the year 2005, a 44 percent drop from the 1990 rate of 49.⁶ India, a country of comparable size and population to China, had an under-five child mortality rate of 74 in 2005, more than double that of China.⁷ Yet a comparison with less-developed countries in East Asia shows that both China and India are lagging behind. By the publication of the *UN Human Development Report 2005*, Vietnam had surpassed China in

improving child mortality⁸ with a 2005 under-five child mortality rate of 19.⁹ In the same year, Malaysia's under-five child mortality rate was 12.¹⁰ In order to meet the 2015 target of a two-thirds reduction in under-five child mortality rate, China has to lower its rate to around 16. On the surface, this goal appears achievable after such a huge rate decrease in only 15 years, but a closer look shows that disparities within the country may affect China's ability to achieve the targets of MDG goals.

Regional and Environmental Challenges to Lowering China's Under-Five Mortality Rates

If child mortality is studied at the regional level, clear divisions become apparent. Wealthy areas along the coast have child mortality rates similar to those found in developed countries. The further inland and more remote the area, the higher the child mortality rates become.¹¹ The causes of child mortality also vary according to region. In the wealthier coastal areas where medical care is more available, child death is mainly due to accidents, diabetes and other non-communicable diseases—similar to the causes of child death in developed countries. In remote rural areas, birth-related reasons, acute respiratory infection, tetanus, and diarrhea are the common child-killers.¹² The majority of child deaths in rural China are preventable with health care, education, and access to safe drinking water and a clean environment. MDG 7, which focuses on environmental sustainability, includes a number of targets that, if met, would significantly improve the pollution problems currently impacting the health of China's rural children.

Clean Water and Sanitation Woes in China

MDG 7 highlights the need for environmental sustainability and includes specific targets for safe drinking water and sanitation, both of which have strong implications for the under-five child mortality rate. According to the *UN Human Development Report 2006*, contaminated drinking water and poor sanitation are jointly the second largest cause of child mortality in the world. Diarrhea caused from dirty drinking water alone causes five times the number of child deaths that are caused by HIV/AIDS. Providing access to safe drinking water has far greater implications than just improved health. Water-related disease significantly impairs education, causing missed school days and diminished learning potential.¹³

A 2004 World Bank policy research working paper studied the effect of environmental factors on child mortality in rural China.¹⁴ The authors found that access to safe drinking water could potentially cut the number of under-five child deaths from diarrhea by over 50 percent, and the number of deaths from acute respiratory infection by almost 40 percent. In China, more than 300 million rural citizens, about a quarter of the country's total population, lack access to clean drinking water.¹⁵

Target 10 of MDG 7 calls for a 50 percent reduction in the number of people lacking “sustainable access” to safe drinking water.¹⁶ In 2003, China's State Environmental Protection Administration reported extremely high pollution levels in its waters: more than 70 percent of the water in five of seven major river systems was deemed unsuitable for human use.¹⁷ In 2004, 88.8 percent of China's urban population had access to clean drinking water, but availability is often significantly lower in rural areas.¹⁸ Water supply is also a serious issue, particularly in northern China, which has less than a quarter of the per capita water capacity of the south and thus uses its supply at unsustainable levels.^{19,20} The Chinese government, in its Eleventh Five-Year Plan period, aims to address water supply and pollution problems by strengthening law enforcement and monitoring, as well as constructing both rural and urban water supply facilities.²¹ China has been very successful in the past in increasing access to water, but pollution is still a serious problem in both rural and urban areas, and can greatly and negatively affect the health of its people, especially the very young.²²

Target 11, also under MDG 7, is to “increase the proportion of the rural population with access to better sanitation.”²³ Diseases that are associated with poor sanitary conditions and unsafe drinking water are still prevalent in China. Diarrhea is still a leading cause of child death in rural areas—the OECD Environmental Indicators in China report issued in July 2007 estimated 30,000 rural children die each year from diarrhea caused by polluted water.²⁴ Far fewer people—less than half—have access to adequate sanitation than to safe water, and if no action is taken, this gap will only widen.²⁵ In urban China, approximately 70 percent of the population has access to sanitation, but in rural China, this figure drops to below 30 percent.²⁶ Rural Guizhou, in particular, is lagging behind with only 10 percent of its population having access to adequate sanitation.²⁷ Even in urban areas, sewage disposal is a problem. In rural areas, sewage is sometimes simply dumped into the fields, becoming a prime breeding ground for such deadly pathogens as *E. coli*, giardia, and those that cause encephalitis.²⁸

Since the mid-1990s, rural sanitation has become an important part of the China’s health policy. In response to its water sanitation problems, China has adopted a total sanitation campaign, a community-led effort to improve sanitation and increase awareness and education of basic hygiene and sanitation issues.²⁹ Yet China still has a long way to go to achieve water sanitation levels comparable to some of its less wealthy neighbors, such as Vietnam and Indonesia.

The under-five child mortality rate is an indirect measure of access to health care and the level of exposure to environmental pollution. Increased sanitation, accessible and affordable health care, and access to clean drinking water top the list of rural China’s needs, as well as basic education for expectant mothers. In order to achieve a two-thirds reduction in under-five child mortality by 2015, the Chinese government must better address the needs of its poorest regions. By increasing investment in rural areas, preventing the migration of dirty industries from eastern urban areas to the rural west, creating more livelihood opportunities for rural farmers, and committing to provide affordable and accessible health care in its poorest regions, China can go a long way towards not only achieving MDG4, but the overall aim of the MDGs: the eradication of poverty.

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