

**Economic and health effects of
Increasing coverage of low cost household
drinking-water supply and sanitation
interventions to countries
off-track to meet MDG target 10**



**Public Health and Environment
Water, Sanitation and Health**

**Economic and health effects of increasing
coverage of low cost household drinking-water
supply and sanitation interventions to countries
off-track to meet MDG target 10**

Background document to the
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EXECUTIVE SUMMARY

Study aims. At current trends the world is expected to fall short of meeting the drinking water Millennium Development Goal (MDG) target by 354 million people and the sanitation MDG target by 564 million people. Recently it was estimated that 1.7 million deaths per year were attributable to unsafe water supply, sanitation and hygiene. A variety of economic impacts are linked to improved water and sanitation, which is one key contributor to poverty reduction efforts. The aim of this study is to estimate the health impacts and economic costs and benefits of improving water supply and sanitation services, with a focus on the least developed countries that are “off-track” to meet the water supply and sanitation MDG targets. In other words, based on trends from 1990 to 2004, these countries are predicted to fall short of one or both of the MDG targets for water supply and sanitation. The study models the impacts of low cost water supply and sanitation improvements in countries where the predicted coverage in 2015 falls short of the water supply and sanitation MDG targets, with the aim of focusing existing budgets as well as new resource allocations on the achievement of the Millennium Development Goal targets in these off-track countries. The study also estimates the costs and benefits of achieving universal access to improved drinking water supply and sanitation.

Study methods. Results are presented for 6 non-OECD developing world regions, based on the UNDP classification. Predicted reductions in the incidence of diarrhoeal disease were calculated for each intervention based on the expected population receiving these interventions and the relative risk reductions of populations moving to lower risk exposure scenarios. Deaths averted were estimated based on a region- and age-specific case fatality rate for diarrheal disease. The costs of the interventions included the full investment and operation and maintenance (O&M) costs of the selected low-cost interventions. The benefits of the interventions included time savings associated with better access to water and sanitation, gain in productive time due to less time spent ill, economic gains associated with saved lives, and health sector and patient costs saved due to less health seeking.

Study results. The benefit-cost ratios (BCR) shown in the table indicate that all low cost water supply and sanitation improvements are cost-beneficial for all developing

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