



Economic Growth, Air Pollution, Epidemiology and Mortality in the Pearl River Delta: Reclaiming our Lost Horizon

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Professor Hedley was trained in the medical schools of Aberdeen and Edinburgh and formerly worked in endocrinology and internal medicine before moving to the field of public health medicine. He has been an active researcher in chronic disease epidemiology, health services research and tobacco control for nearly 40 years. In 1983 he was appointed to the chair of public health in the University of Glasgow and since 1988 has been Professor of Community Medicine in Hong Kong and honorary consultant to the Hong Kong Department of Health and to the Hospital Authority. He was the first Chief Censor of the College of Community Medicine, and first Chair of the Health Services Research Grants Awards Committee. He was Chairman of the Hong Kong Council on Smoking and Health from 1997-2002. In 1999 he was awarded a World Health Organisation medal for outstanding contributions to public health. He is currently a reviewer for the World Health Organization draft guidelines on air pollution controls.

The social and economic development of the Pearl River Delta region is raising standards of living and, through that process, improving health protection. However anthropogenic pollution has been a major and seriously neglected consequence of this progress and threatens to negate many health gains.

In October 2005 the World Health Organization completed its most recent review of the evidence on the health effects of the criteria air pollutants respirable suspended particulates (PM₁₀), nitrogen dioxide (NO₂), sulphur dioxide (SO₂) and ozone (O₃) which will be published in September 2006. Research from Hong Kong forms a substantial part of the evidence base on health effects.

Analyses of pollution impacts on morbidity and mortality are based on *coefficients of risk* for hospital admissions and deaths from cardiopulmonary disease. These estimated effects have been used to demonstrate the lack of any *threshold* for pollutant-health effects and to set interim guidelines for pollutant target levels, which will be released in 2006 and be at least one half to one third of present levels in the current 1987 version of Hong Kong's air quality objectives.

The accelerated pollution of the PRD is the result of a failure to apply a public health approach and the precautionary principle to environmental management. It is a cause of large scale losses in health related quality of life and economic benefits. There is no interface between the frontier of public health science and regional government policy. The frontiers of academic medicine should include realistic opportunities and resources to analyze the interface between science and policy to maximize health protection.