

## **Governance on Environmental Change and Health Risk in China**

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The environment has significantly changed during the past 50 years in China due to intense anthropogenic activities and global environmental changes. The main changes in terms of the environment are as follows: (1) climate zones have shifted in response to global warming; (2) significant changes in natural hydrological processes and uneven precipitation changes have induced more floods in southern China and more severe droughts in northern China; (3) serious pollution; (4) enormous demands on energy and raw materials have resulted in changes of geographical economic patterns in regards to the process of industrialization and this has brought changes to the patterns of population, urban systems, and supply and demand for natural resources. As a result, the land cover pattern has been greatly modified. Urban areas and transportation networks have expanded and occupy a great deal of farmland. This all indicates that some irreversible changes to the environment have taken place and that resources and the environment have become limiting factors to national security.

With the environmental change, the health risks can be seen in rural areas: (1) traditional environmental and health hazards associated with an agricultural society such as endemic diseases and infectious diseases are still prevalent; (2) indoor air pollution is having a severe impact on the health of rural people; (3) with greater pollution, food quality and drinking water security have become major concerns; (4) malnutrition is still a problem for rural people. At the same time, health hazards associated with economic development and rapid urbanization can be seen: (1) degradation of air quality and water quality in cities; (2) great amounts of solid waste; (3) a rise in chronic diseases such as cardiovascular diseases, cancer and stress-related diseases that accompany fast lifestyle changes; (4) socio-economic pressures from urbanization have increased the impacts on the environment and human health especially for vulnerable populations like the elderly and migrants; (5) China's public health expenditure increased rapidly since 1980s but the government investment decreased simultaneously and there is differentiation in health care delivery for different populations.

Rapid economic development accompanied by serious environmental impacts has lead to significant health threats in China. From the perspectives of social science, natural science, and policy-making we must strengthen efforts to identify appropriate pathways for sustainable development and to identify the opportunities to cope with the effects of environmental change, such as better living conditions, economic growth, efficient land and energy use, technical innovation, access to information, provision of clean water and access to health care. The need for more effective cross-sectoral collaboration on health should be recognized; systematic planning and governance as well as leadership of stakeholders across disciplines, sectors,

communities and states are needed.