

strategy could significantly influence the overall effect of the Climate Convention. While particulars of China's future greenhouse gas emissions are uncertain, demographic pressures and continued economic growth indicate that emissions will rise. In Vaclav Smil's considered opinion:

The combination of large absolute population increases, and the necessities of feeding huge populations and supplying quantities of fossil fuels and electricity in order to energize the much needed modernization will lead inexorably to higher emissions of CO₂, CH₄ and N₂O⁶⁰

At present, China does not have a great deal of scope for fuel diversification. Substitution of coal with less polluting fuels is not an economically viable option on a large scale. Greater use of natural gas could reduce environmental stress. Currently, however, natural gas represents only 2 percent of commercial consumption, and proven reserves are low. Hydroelectric and nuclear power have potential promise, but their development requires large amounts of capital and long construction periods. They are also not without their own environmental considerations, as illustrated by international concerns over the disposal of nuclear waste and the controversy over the Three Gorges dam. Geothermal, wind, solar and other renewable sources are also currently costly, and at best can have only a marginal impact on supplying China's total energy needs in the foreseeable future.

5.5 Ecological Troubles

Aside from pollution problems, China faces severe ecological problems. Foremost, the Chinese government is aware that agricultural practices have created a number of environmental problems. Excessive use of irrigation, misuse of fertilizers, over-intensified use of marginal lands and inappropriate use of pesticides have all played a contributing role.

The international press and some foreign scholars have expressed concerns with the constraints on increasing China's cropland and the pressure of a growing population. The implicit reasoning is that large numbers of Chinese may go hungry, and that in the environmental-national security context this would lead to violent conflict. While this reasoning cannot be dismissed as incorrect, there are a number of considerations that need to be raised to understand the assertion.

First, how serious is the absolute change in cropland area. The United Nations'

⁶⁰Vaclav Smil, Global Ecology: Environmental Change and Social Flexibility, pp.175-6.