

Sustainable Development in China

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When I tell people that one of my business interests is fostering sustainable development in China, they laugh and say: "Well it certainly needs that!" Their experience is often based on a visit to Beijing in the 1990s, when that city was ranked third highest in air pollution in China. They have no idea of the dramatic transformation that is taking place there and in several other major cities of the world's most populous nation. Last year, a citizen of Beijing told me, in a voice of full of wonder, "Now we can see the stars at night!"

China's future pathway could determine the success or failure of global sustainable development. If, in the future, China seeks a 'standard of living' (i.e. a level of wastage and environmental destruction) equivalent to that of the average Australian in 2002, then it is unlikely that human society has much of a future on Planet Earth. If, through excess demand for water, China becomes an importer of staple foods, then world food prices will increase and so will hunger in many poor countries.

However, at present, it is the USA that has the world's largest 'ecological footprint' and greenhouse gas emissions. In 2001 the president of the USA announced that he would not sign the Kyoto Protocol to begin the process of reducing emissions, because developing countries such as China were not part of the process. About the same time it was revealed by a US government agency that China's emissions had been declining every year since 1997, despite very high rates of economic growth. As I write this article, China announces that it will ratify the Kyoto Protocol. Meanwhile, US and Australian emissions continue to climb steeply.

Not only is sustainable development official government policy in China, but it is also being implemented in some regions at a pace that far outstrips anything seen in Australia. Last year Shanghai announced that it would build the first commercial very fast train line based upon magnetic levitation, which is cutting edge German technology. The Maglev will connect the new Pudong international airport to the city's rapidly growing subway system, a distance of 30 km. This year the track base was completed over the whole distance. Furthermore, Shanghai, Beijing, Shenzhen, Qingdao and Chengdu are building or planning new underground railway lines and in some cases light rail lines at ground level.

The transformation of Beijing, Qingdao and Nanjing is driven in part by China's goal of achieving a Green Olympics in 2008, thus emulating the Sydney 2000 Olympics.

However, the determination to achieve sustainable development in Shanghai, which is not an Olympic city, cannot be explained in this way. In the city's urban planning exhibition, which attracts thousands of visitors each day, it is stated that Shanghai wants to become one of the world's leading commercial cities in the 21st century. To do this, one of the displays explains, Shanghai must clean up the air and the river. There is a strong recognition that sustainable development is good for business, tourism and citizens.

To encourage sustainable development, the Government of China has strengthened environmental legislation and is investing the equivalent of US\$12 billion over the period 1998 to 2007. China's environmental protection sector is planned to grow at 15% p.a. Cities are closing their most polluting factories and moving others away from residential and commercial areas. They are encouraging modernisation of industry, a program that has among other things produced steady improvements in the efficiency of energy use over the past decade.



Figure 1. A model of a future Shanghai covers a whole floor at the Shanghai urban planning exhibition (Photo by Mark Diesendorf)

Although coal is a major energy source in China, as it is in Australia, coal is gradually being replaced by the less-polluting natural gas for domestic heating and hot water in some cities. Recently a contract was signed to sell a huge quantity of natural gas from Australia's North-West Shelf to China. While helping China, this sale will also reduce Australia's options for using natural gas as a transitional fuel to a sustainable energy future.

In China, subsidies to the production and use of fossil fuels have been largely removed. Yet in Australia, over A\$6 billion in subsidies are directed annually to fossil fuels, dwarfing the funding of sustainable energy.

In the northern part of China, where there is a huge demand for water for agriculture and industry, the once-mighty Yellow River often ceases to flow. To grapple with this serious problem, many northern cities are starting to charge substantial prices for water and for releasing polluted wastewater into the environment. The new pricing systems will encourage China's economy to become much more efficient in its use of water. Once again, Australia, which wastes 90% of river water diverted to irrigation, has something to learn.

With limited funds the Chinese Government is trying to redress the economic disparities between east and west of the country. However, current national economic restructuring is throwing millions of people out of work all over the country, thus increasing the gap between the rich and poor. Without a PAYE tax system, China may not be able to afford a national social security system, and so its social sustainability will face difficulties over the foreseeable future.

China's commitment to ecologically sustainable development offers business opportunities to Australia and the rest of the world. Last July I visited an innovative, environmentally sound, paint factory which has just commenced production in the small city of Yantai in north-east China. World Wide Paints is a joint venture between Chinese manufacturing skills and capital on one hand and Australian R & D expertise on the other. Its manufacturing process produces essentially no liquid, solid or gaseous wastes, apart from a modest level of greenhouse gas emissions arising from energy use. Furthermore, unlike ordinary paints, the paints produced at Yantai contain extremely low levels

