

Booming giant

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Last year we reported on the phenomenal growth that China is currently experiencing (**China set to overtake UK**). With its economy growing at around 10% per annum, China has emerged as a leading **Newly Industrialised Country (NIC)** and will overtake Britain and France in 2005 to become the world's fourth biggest economy. This Christmas, UK High Street stores will be overflowing with products manufactured in China – the new 'workshop of the world'.

However, newspaper reports are starting to document the strains that economic development is placing on the region, some of which call into question the sustainability of current growth levels.

- *Fuel shortages* may be faced by up to 200 million people this winter. Richer Chinese – who increasingly own electric heaters, televisions and other appliances – are taking a much greater share of electricity than they used to. As a result, there may not be enough to go around. Fuel supplies are still controlled directly by the government - unlike in the UK where private companies now manage key utilities such as electricity and gas - and November 15 is the traditional day when the capital city of Beijing's boilers and radiators are allowed to be switched on, ahead of a sub-zero winter. However, this year it has transpired that the city authorities only have around half the coal supplies they need for the winter, now that fuel use is soaring (*The Guardian, 16 November 2004*). The Chinese authority is already engaged in a 'battle for resources' with its rival competitor for oil resources in the region, Japan. (see *BBC - Oil fuels Asian giants' tensions*)
- *Interest rates* have recently been increased by the government, in an attempt to cool the economy and avoid over-heating (*The Guardian, 29 October 2004*). China's retail sales for October rose a faster-than-expected 14.2 percent from a year earlier, their highest growth rate in five months; though some analysts said the strength was due in part to higher consumer prices. Food prices have been a major driver of inflation this year. China's retail sector was expected to grow 8-10 percent a year until the end of the decade, and could be worth some \$2.4 trillion by 2020, state media said (Reuters 15 November 2004)
- *Health problems* are being reported by increasing numbers of Chinese, as rapid urban development takes place. A recent study by the Red Cross Society of China has found that 70% of residents in Beijing and Shanghai are 'ill, unfit or short of energy'. China is ranked 144th out of 191 by the World Health Organisation in terms of its health services. China has approved human testing of a locally developed potential AIDS vaccine, the official Xinhua news agency said, just days before **World AIDS Day** on 1st December. Officials have pledged to speed up the approval process for anti-AIDS drugs in China, where the United Nations has warned that the number of people with AIDS could rise to 10 million by 2010 unless serious steps are taken to fight the epidemic (*Reuters 28 November 2004*).

Carrying Capacity – how and why can it change?

Carrying Capacity is the optimum number of people that can be sustained by an environment and its resources.

- To keep up with population growth and / or on-going economic development, carrying capacity must continually be raised in industrialising and industrialised nations. Improvements in food supply that accompany early industrialisation might include: crop rotation; irrigation; added inputs of fertilisers; and cross-breeding. Later, the application of advanced science such as genetic modification of plant and animal species might raise yields even further.
- Population growth is not necessary for carrying capacity to be exceeded. An affluent population may begin to make increasing demands for resources (such as water or oil) while generating ever-growing amounts of pollution, beyond the assimilative capacity of the land. Put another way, the 'ecological footprint' of each individual is said to be growing. This is now happening in China.
- Physical changes can also reduce carrying capacity, such as a naturally-occurring series of very dry years with low rainfall.
- As trade with other nations improves over time, additional food and energy imports can also be looked for, if domestic outputs cannot be raised sufficiently. China has already reached this stage in terms of its oil consumption.

No nation of China's size has ever attempted to industrialise before: can nearly one and a half billion actually be supported, as they start to become greater consumers of energy? Citizens of industrialised nations have a much bigger ecological footprint: they require a much greater area of land and water to support them than people living in subsistence rural economies. Will China eventually be able to support its vast population at a level of comfort equivalent to Europe and North America? Will imports of food and other resources become more necessary as time passes? Who will provide these imports?

Whatever happens, development in China will have profound implications for other nations due to the highly inter-connected nature of the global economy. For instance, the recent rise in Chinese interest rates sent world financial markets into turmoil. This is unsurprising, given the number of Transnational Corporations that have now invested heavily in Chinese labour and financial markets. Meanwhile, world commodities such as oil, copper and steel have all reached a record high price; such is the demand for these raw materials in China's cities and factories.

Partly as a result of these rises in the price of the imports it requires, China is currently trying to improve its own energy supplies by building hydroelectric dams (see [Dam downstream disaster](#)). The Three Gorges project is the most ambitious of these plans. Although China possesses impressive coal reserves, production cannot keep up with rising demand, making the country heavily dependent upon foreign oil imports. China is now the world's second-largest power consumer after the US, importing around 120 million tonnes of oil this year.

The Guardian's 'China Week'

In November 2004, *The Guardian* newspaper published a special supplement on China each day for a week. A team of fifteen journalists were sent to China to capture a 'snapshot' of the nation during this incredible period of economic, social and demographic transition. The resulting series of articles is essential reading for geography students.

Check out [The Guardian website's on-line archive for the series](#):

Of particular interest to GCSE & AS students:

[One-child rule](#)

[Urban growth](#)

[Water supplies](#)

Exam tips

11-16 curriculum

Can everyone in the world be rich? Is there actually enough oil in the world for every Chinese family to run a car, for instance? What kind of environmental impacts could we expect, if everyone in China and India (nearly 3 billion people) had a modern home, full of electrical lights and gadgets?

AS/A2 exam tips

This story is a useful reminder of the dynamic relationship between people and resources. Consider the following question, from a June 2004 Edexcel paper:

Describe and explain the impacts of industrialisation and trade on a country's carrying capacity (5 marks / 10 lines writing)

Here is a challenging question that asks AS candidates to think about how developments such as hydro-electric power (industrialisation) and oil importing (trade) allow a nation to support greater numbers than were possible in its past. Use some of the data and place names found in this article to help support your practise answer.