Shanghai, often referred to as China's commercial and financial centre, has enjoyed strong economic growth over the past two decades. It is now among the country's richest cities, with a GDP per capita of US$11,500. The State Council, China's cabinet, approved a blueprint in March 2009 for Shanghai to become a global international financial and shipping centre by 2020. A sign of Shanghai's growing international status was the city's selection as venue for World Expo 2010, a world trade fair, held between May and October 2010. Heavy industry, however, still accounts for a large proportion of Shanghai's economy. With 19.2 million inhabitants, Shanghai has the most highly populated administrative area within the Asian Green City Index.

Shanghai ranks average overall in the Index. The city ranks average in six of the eight categories: transport, waste, water, sanitation, air quality and environmental governance. The results reflect the fact that Shanghai is generally average for indicators such as green spaces per person or the share of wastewater treated. Government policies in these areas also have room for improvement, although Shanghai's clean air policies are among the strongest in the Index.

When compared to other cities with incomes in the middle range (with a US$GDP of between US$10,000 and US$25,000), Shanghai generates the least waste per capita and has the second lowest level of water leakages. In the land use and buildings category, Shanghai ranks below average, and for energy and CO₂ the city ranks well below average, mainly because it has the highest CO₂ emissions per capita and the highest level of energy consumption in the Index.

Energy and CO₂: Shanghai ranks well below average in the energy and CO₂ category. It has the highest level of CO₂ emissions per capita in the Index, at an estimated 9.7 tonnes, more than twice the 22-city average of 4.6 tonnes. Nearly half of Shanghai's energy consumption is based on coal, whereas in 2007 the figure was down to 47%. But the prevalence of energy-intensive heavy industry in the city — particularly steel, construction and automotive manufacturing — has driven up Shanghai's energy consumption per US$ of GDP, which is the highest in the Index at 14.8 megajoules. Falling steel prices, which reduce the amount of revenue collected from steel, have also played a part in increasing the city's ratio of energy consumption to economic output. And recent construction work to prepare for the World Expo in 2010 may also have increased the figure. Shanghai scores better in clean energy policies, however, by investing in waste-to-energy projects, souring or producing clean and renewable energy, and making efforts to consume energy more efficiently. In addition, Shanghai and the national government are investing in alternative sources of electricity for the future, including solar, biomass, wind, natural gas, nuclear and "clean coal", which involves capturing and storing greenhouse gases at coal plants. But there is still room for improvement in policies with regard to climate change. Shanghai, for example, has not conducted a baseline environmental review of greenhouse gas emissions within the last five years.

Green initiatives: Shanghai has been investing in wind farms, and in 2006 the city set a target to have 1.3 major wind farms in operation by 2020. They will have a total capacity of 2 gigawatts and will provide enough electricity to meet the annual needs of four million households.

Land use and buildings: Shanghai ranks below average in land use and buildings. The city has a relatively low population density, at 3,000 people per square kilometre, compared to the Index average of 8,200 people per square
kilometre. In addition, Shanghai’s amount of green spaces, at 18 square metres per person, is below the Index average of 39 square metres. However, it does have measures in place to protect existing green spaces and create environmentally sensitive areas (see “green initiatives” below). Shanghai also has a policy aimed at containing urban sprawl, and has taken steps to protect environmentally sensitive areas from development. Policies on eco-buildings are also relatively strong. The city actively increases public awareness of ways to improve the energy efficiency of buildings, as well as providing incentives and regulations to motivate businesses and households to lower their energy use. In addition, the city leads by example through adopting its own green standards for public building projects.

Green initiatives: Shanghai’s city government has undertaken a range of projects aimed at reducing energy consumption in buildings, with a goal to save the equivalent of 9 million tonnes of coal between 2006 and 2010. The projects include energy-efficient lighting, reusing waste heat, and improving efficiency of coal burners. Shanghai’s authorities have also made a concerted effort to increase green spaces in the city. The United Nations estimates that the city doubled the amount of green spaces between 2000 and 2008. As part of its green spaces expansion, a number of parks and green areas have been created, including the Yangzhong Green Area, Minhang Sports Park and the North Bund Green Area.

Transport: Shanghai is average in the transport category. The city’s superior public transport network (defined in the Index as transport that moves large numbers of passengers quickly in dedicated lanes, such as metro, bus rapid transit, or trams) measures 0.07 km per square kilometre, shorter than the Index average of 0.17 km per square kilometre, but is the longest in the world in absolute length (see “green initiatives” below). In 2008 the city announced plans to invest US$16 billion for a network that would include 50 new urban rail routes and at least five ring lines to improve the efficiency of air travel, as well as linking the city with other metropolitan areas. According to the United Nations, two waste incinerators have been established in Shanghai over the last decade with a total capacity of 2,500 tonnes per day. Through investment in more facilities, and the closing down of sub-standard waste plants, Shanghai’s authorities aim to increase the proportion of waste that the city safely disposes of to 85% by 2020.

Water: Shanghai is average in the water category. The city is ranked well for its relatively high daily consumption of water, at 411 litres per capita, compared to the Index average of 278 litres. If Shanghai’s large population of 19.2 million is factored into the huge scale of Shanghai’s total water consumption becomes even more apparent. The high water demands of Shanghai’s manufacturing sector largely explain the above average per capita consumption level. But water is also plentiful in Shanghai, located at the mouth of the Yangtze River, and the city scores well for its comparatively efficient water system. Losing just over 10% of its water flow through leaks, compared with the Index average of 22%, Shanghai has the second most efficient water system among cities with mid-range incomes. In water policy areas, Shanghai scores reasonably well for having regulations in place to improve and sustain the quality of surface water. The city also sets standards for levels of key pollutants in surface or drinking water, and enforces water pollution standards on local industry. In addition, Shanghai is among the most proactive cities in Index at implementing a wide range of measures, including water tariffs, to improve water efficiency and reduce over-consumption.

Sanitation: Shanghai ranks average in the sanitation category. The city does relatively well on the proportion of wastewater treated, at an estimated 78%, compared to the Index average of 60%. And this figure has risen sharply in recent years (see “green initiatives” below). The level of access to sanitation in Shanghai, at an estimated 73%, is also above the Index average of 70%. Shanghai has the third best rate of sanitation access when compared among cities with the highest populations in the Index (above 10 million people). While Shanghai performs reasonably well for sanitation policy overall, including a code to promote environmentally sustainable sanitation services and minimum standards for wastewater treatment, the city does not promote public awareness around the efficient and hygienic use of sanitation systems.

Green initiatives: Shanghai has built 50 new sewage treatment plants in recent years, allowing the city to treat more than three quarters of its total sewage, up from only 55% in 2000. The goal is to treat 90% of sewage by 2020.

Energy and CO2: CO2 emissions per person (tonnes/person) in Shanghai in 2009 was 8.17 t, compared to the Index average of 9.7 t. This is relatively strong. The city actively increases public awareness of ways to improve the energy efficiency of buildings, as well as providing incentives and regulations to motivate businesses and households to lower their energy use. In addition, the city leads by example through adopting its own green standards for public building projects.

Air quality: Shanghai ranks average in air quality. High traffic volumes and a heavy reliance on coal have helped push up average daily sulphur dioxide emissions to 35 micrograms per cubic metre, higher than the Index average of 23 micrograms. Daily nitrogen dioxide levels, at 53 micrograms per cubic metre, are also higher than the Index average of 47 micrograms. In terms of daily suspended particulate matter, Shanghai does relatively better, measuring 81 micrograms per cubic metre versus an Index average of 108 micrograms. For its clean air policies, Shanghai scores well. The city actively increases public awareness of ways to improve the energy efficiency of buildings, as well as providing incentives and regulations to motivate businesses and households to lower their energy use. In addition, the city leads by example through adopting its own green standards for public building projects.