**Population growth**

[China's "one-child" policy](http://www.livescience.com/26166-china-one-child-policy-changes-personalities.html) is universally acknowledged as having effectively kept the country's population in check. Nonetheless, China is home to about 1.3 billion people — over one-seventh of the planet's people live in the nation.

What's more of a concern to environmental advocates is the growing affluence of China's middle class, who are now adopting Western-style consumer patterns. While items like red meat, liquor and automobiles were once considered forbidden luxuries, more and more families are driving their car to a market to buy tenderloin beef, 120-proof baijiuliquor and other consumer goods.

The health risks associated with these kinds of purchases have not gone unnoticed: Binge drinking and alcohol-related hospitalizations have now reached "epidemic proportions," the [Guardian](http://www.guardian.co.uk/commentisfree/2011/aug/22/rise-of-binge-drinking-china) reports, and the Chinese — who once enjoyed a relatively healthy diet and low rates of cancer — now dine on twice as much meat as Americans, consuming one-quarter of the world's supply, according to the [Telegraph](http://www.telegraph.co.uk/news/worldnews/asia/china/9605048/China-now-eats-twice-as-much-meat-as-the-United-States.html).

These consumer trends, multiplied across a large and heavily populated country, have a global reach that affects everything from sugar prices in Europe to climate change in Greenland: Most climate experts agree that China's industrial growth, and its dependence on coal-burning, are significant drivers of climate change, [Scientific American](http://www.scientificamerican.com/article.cfm?id=chinas-soaring-coal-consumption-poses-climate-challenge) reports.

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**Cancer Rates**

Perhaps no other issue underscores China's reckless disregard for environmental and public health more than the existence of "cancer villages," entire towns that have been written off as so polluted that simply living there is a cancer risk.

For years, individuals and groups have waged a desperate campaign to force the government to address — or even acknowledge — the high rates of stomach, liver, kidney and colon cancer in certain areas, usually adjacent to heavy industrial complexes, the [BBC](http://www.bbc.co.uk/news/world-asia-china-21545868) reports.

In Shangba, a city in southern Guangdong province, the river that flows through town changes from white to a startling shade of orange because of varying types of industrial effluent, [Reuters](http://www.reuters.com/article/2009/09/17/us-china-pollution-cancer-idUSTRE58G00T20090917) reports. Many of the river's contaminants, like cadmium and zinc, are known to cause cancer.

"All the fish died, even chickens and ducks that drank from the river died. If you put your leg in the water, you'll get rashes and a terrible itch," He Shuncai, a 34-year-old farmer from Shangba, told Reuters. "Last year alone, six people in our village died from cancer and they were in their 30s and 40s."

In February of this year, a report from China's environment ministry noted that chemicals and heavy metals banned in other countries are found throughout China. The report went on to state that there are "some serious cases of health and social problems like the emergence of cancer villages in individual regions," marking the first official admission of the problem that has plagued the country for decades.

**Biodiversity**

Closely related to deforestation and desertification is the issue of habitat loss and the resulting drop in biodiversity. As vast areas of forest are cleared for farmland, bamboo plantations, timber and fuel wood, endangered animals like [pandas](http://www.livescience.com/27335-giant-pandas.html) struggle to survive.

China's issues with species loss extend far beyond its borders: The slaughter of [elephants for ivory](http://www.livescience.com/21195-elephant-poaching-gabon-burns-ivory.html), the killing of rhinos for their horns, and the culling of tigers for their bones (as medicine) and penises (as aphrodisiacs) have one primary source: the Chinese market.

An analysis by CITES program on Monitoring the Illegal Killing of Elephants "shows poaching to be highest where human livelihoods are most insecure and where governance and law enforcement are weakest. It also suggests that poaching is driven by demand for ivory in East Asia. The number of [African elephants](http://www.livescience.com/9182-african-elephant-separate-species.html) poached in 2011 alone could well run into the tens of thousands," said Julian Blanc, who coordinates the program in a statement issued by CITES.

[Sharks](http://www.livescience.com/topics/sharks/) are endangered worldwide, largely because of shark finning — the removal of dorsal fins from still-living sharks — for the Chinese delicacy known as shark fin soup

Sharks are harvested for their meat, liver oil and cartilage, as well as their fins — the main ingredient in [shark fin soup](http://www.livescience.com/33094-why-eat-shark-fin-soup.html), which is considered a delicacy in parts of East Asia. Because sharks grow and reproduce at relatively slow rates, it can be difficult for their populations to bounce back from big losses. Conservationists have warned that overfishing could cause rapid declines in the top predators.

In a study published in the journal Marine Policy last year, researchers estimated that [100 million sharks were killed](http://www.livescience.com/27575-100-million-sharks-killed-annually.html) in 2000 and 97 million were killed in 2010. Those numbers were based on available data of shark deaths and estimates of unreported illegal catches

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**Desertification**

China has a history of intensive agriculture going back millennia, so it's perhaps unsurprising that much of the nation's 3.7 million square-mile (9.6 million square kilometers) territory has been subject to[deforestation](http://www.livescience.com/27692-deforestation.html).

Population pressure, the conversion of forests to farmland, and hydroelectric and other infrastructure projects have placed China's remaining forests at risk. This prompted the United Nations Environment Programme to list the country's forests as threatened and in need of protection.

Following closely on the heels of deforestation and agricultural development is desertification, the destruction of vegetative land cover that results in a landscape defined by bare soil and rock. About 1 million square miles (2.6 million sq km) of China is now under desertification — that's about one-quarter of the country’s total land surface, spread across 18 provinces, according to [IPS News Agency](http://www.ipsnews.net/2012/07/china-battles-desertification/).

Blinding dust storms, mud-choked rivers and eroded topsoil are often the result of desertification. Despite recent gains in reforestation and grasslands restoration, the desert continues to expand each year by about 950 square miles (2,460 sq km), according to the World Wildlife Fund (WWF). [[Dry and Drying: Stark Images of Drought](http://www.livescience.com/21634-dry-dying-images-of-drought.html)]

The resulting loss of arable land has created a generation of "eco-migrants," the [Guardian](http://www.guardian.co.uk/world/2011/jan/04/china-desertification) reports, who are forced to leave their homelands, because their traditional agricultural lifestyle is no longer an option.

"We've made progress, but we face a daunting challenge," Liu Tuo, Chinese desertification control officer, told the Guardian. "It may take China 300 years."

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**Water pollution**

Thousands of dead pigs floating past Shanghai, dramatic though they are, may be the least of China's water pollution worries.

In January, a chemical accident leaked benzene, a known cancer-causing agent, into a tributary of the Huangpu River (where the dead pigs were discovered). More than 20 people were hospitalized as a result, according to the [Wall Street Journal](http://online.wsj.com/article/SB10001424127887324096404578353953755771178.html), and area residents were forced to rely on fire trucks to deliver safe drinking water.

More than half of China's surface water is so polluted it cannot be treated to make it drinkable, the [Economist](http://www.economist.com/blogs/analects/2013/03/water-pollution) reports, and one-quarter of it is so dangerous it can't even be used for industrial purposes.

Groundwater isn't any safer: About 40 percent of China's farmland relies on underground water for irrigation, and an estimated 90 percent is polluted, [Reuters](http://www.reuters.com/article/2013/03/10/us-china-parliament-pollution-idUSBRE92900R20130310) reports. About 60 percent of the groundwater beneath Chinese cities is described as "severely polluted" by the Economist.

Last December — shortly after his sister died of lung cancer at age 35 — businessman Jin Zengmin from Zhejiang province offered a 200,000-yuan ($32,000) reward to any local environmental official who would swim in a nearby river, where Jin once swam as a boy, [Time.com](http://world.time.com/2013/03/06/in-china-water-you-wouldnt-dare-swim-in-let-alone-drink/) reports. The river is now black with sludge from an upstream shoe factory.

His reward remains uncollected.

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**Air pollution**

According to the Environmental Protection Agency's air quality scale, any pollution rating above 300 means the air is unsafe to breathe. Under these conditions, people should stay indoors with an air purifier running and remain as motionless as possible, according to U.S. Embassy Beijing guidelines.

In January alone, there were 19 days when the index in Beijing surpassed that 300 threshold, according to the [Washington Post](http://www.washingtonpost.com/national/health-science/living-in-beijings-polluted-air/2013/03/11/6606e45e-7489-11e2-8f84-3e4b513b1a13_story.html), and readings above 500 are no longer unusual. On Jan. 12, the reading reached an eye-bleeding 886, comparable to living inside a smoking lounge.

Manufacturing industries and Beijing's 5 million-plus cars all contribute to the city's crippling air pollution, but most experts primarily blame the coal-burning electrical plants that power China's breakneck economic growth.

China now burns 47 percent of the world's coal, roughly equal to the amount used by all other countries of the world combined, the [New York Times](http://www.nytimes.com/2013/01/31/world/asia/beijing-takes-emergency-steps-to-fight-smog.html?ref=environment) reports. And Beijing is surrounded by a vast network of coal-burning power plants.

But as foul as it is, Beijing's air isn't even China's worst: That dubious honor goes to Ürümqi in the country's far west, which frequently joins other Chinese cities like Lanzhou and Linfen on lists of the world's most polluted places.

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