

The rise of the urbanite



~10,000 BC

Neolithic people in Mesopotamia, now roughly Iraq, Kuwait and Syria, swap nomadic hunter-gatherer lifestyles for life in villages, near which they grow crops and keep livestock. These settlements attract vermin, insects and parasites, and the denser populations that they support encourage infectious diseases to emerge. Many animal pathogens, including those that cause tuberculosis and smallpox, make the jump to humans.

ANCIENT METROPOLIS ~ 2600 BC

The city of Caral takes shape in the Supe Valley, Peru on the slopes of the Andes mountain range. The first major city in the Western Hemisphere, Caral boasts massive pyramids and extensive residential complexes that cover an area of 65 hectares.



~ 6000 BC

Recognizable cities appear in Mesopotamia (pictured) on the floodplains of the rivers Tigris and Euphrates. Other cities follow: in the Indus Valley, now Pakistan; on the banks of the River Nile in Egypt; and in the east along the Yellow River in China. As they grow, so does the production of waste. Contaminated and stagnant water trigger outbreaks of disease.

FLUSHED WITH PRIDE - 600 BC

Tarquinius Priscus, the King of Rome, orders the construction of the Cloaca Maxima (pictured), or the Greatest Sewer, to drain the marshes that surround the city and to flush waste into the River Tiber. Over the centuries, the sewer is expanded, and it is still in use.



~ 3200 BC

Shahr-e Sūkhté — the Burnt City — in southeast Iran installs a system of pipes to supply clean water as well as sewers to discharge waste. In the Indus Valley, the grid-based cities of Harappa and Mohenjo Daro manage waste with drains in the streets and brick-lined sewers (pictured). Most houses have a private well and toilet.

DIN CITY - 100-110

The Roman satirical poet Juvenal writes of the “thousand perils” that are faced by those who live in ancient Rome (pictured). These include fire, collapsing buildings — and insomnia caused by night-time traffic. He states that the noise from passing wagons would “rouse a dozing seal — or an emperor.”



100

The population of Rome reaches 1 million. According to the Greek geographer Strabo, while the Greeks build beautiful cities, the Romans focus on “paving their roads, constructing aqueducts, and sewers.” Aqueducts provide more than 1,000 litres of water per person, per day — far beyond the amount that people use today. Yet hygiene is poor, diseases are rife and mortality is high.

1348

Bubonic plague — the Black Death — sweeps across Europe. The pandemic prompts many city authorities to restrict the movement of residents. In Italy, the cities of Venice, Florence and Lucca set up boards that have the power to impose — and enforce — quarantine.



FIERY WORDS 1661

English diarist John Evelyn presents King Charles II with *Fumifugium* — a discussion of air pollution in London, in which he likens the city to the “suburbs of hell”. Evelyn suggests solutions such as a switch to cleaner fuels.

From their earliest beginnings, cities have brought both benefits and risks to the health of their inhabitants. Although some of the hazards have been banished, others remain — and new ones have emerged. By Stephanie Pain



MASS MOVEMENT 1863

London opens the world's first underground railway line (pictured), which uses coal-fired steam trains. The city soon has a network of subterranean electric lines and trains that form part of the earliest mass-transport system.

UPWARDLY MOBILE 1885

US architect William Le Baron Jenney builds the first skyscraper in the world, the ten-storey Home Insurance Building (pictured) in Chicago. Its metal frame allows tall structures to be built without the need for thicker walls — an innovation that enables high-density city living.



GREEN SHOOTS 1992

The UN Earth Summit in Rio de Janeiro, Brazil, pushes sustainability and climate change up the political agenda — which prompts leaders to take action. Planting trees and creating green spaces are proposed as ways to soak up excess rainwater and to mop up pollutants.

DEAD HEAT 2003

Europe experiences its hottest summer for 500 years, which kills an estimated 70,000 people. Those in cities are the most affected as a result of an urban heat-island effect, and morgues run out of space as the death toll rises.

TIPPING POINT 2008

More than half of the world's population now lives in urban areas. In more-developed nations, the figure is around 74%; in less-developed ones, 44% live in cities. By 2100, 85% of the world's population is expected to be urban.

~1750

The Industrial Revolution triggers the first large wave of urbanization. Across Europe, rural dwellers flock to the cities that are developing around centres of manufacturing. The population of London soon reaches 1 million and continues to grow as more migrants come in search of work. Cramped housing and poor sanitation lead to epidemics and high mortality.

1854

Cholera rages through London's Soho district, and the outbreak is traced to a well that is contaminated by sewage. London's sewage problem persists until the summer of 1858 when the stench of the River Thames reaches Members of Parliament in the Palace of Westminster. A network of sewers and pumps designed by visionary engineer Joseph Bazalgette (pictured) is hurriedly approved. After its completion in 1875, London never experiences another cholera epidemic.



1893

People converge on the World's Columbian Exposition in Chicago, Illinois, to admire the White City. The architectural exhibit embodies the 'city beautiful' concept, which proposes that decaying urban centres are replaced with classical architecture, parks and lakes to remedy social unrest and crime. In the United Kingdom, the garden city movement also advocates green spaces, fresh air and walking.

1943



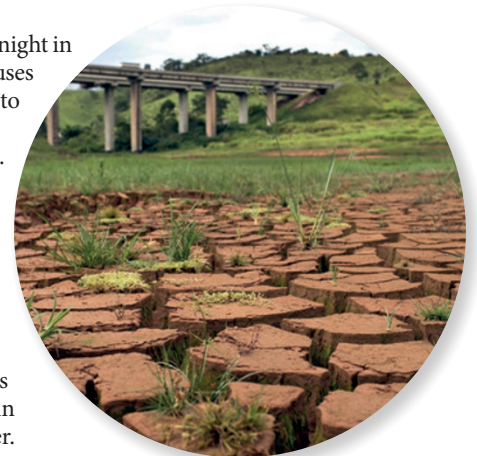
A thick haze that irritates the lungs settles over wartime Los Angeles, California. The cause remains unknown until Arie Haagen-Smit, a chemist at the California Institute of Technology in Pasadena, solves the mystery — the haze consists mainly of ozone, which is formed by the action of sunlight on the emissions that spew from car exhausts.

2003

In February, a doctor from Guangdong in China spends a night in a hotel in Hong Kong. He is infected with the virus that causes severe acute respiratory syndrome (SARS), which spreads to other guests who then carry it around the world. By June, almost 8,500 people in 30 countries have contracted SARS.

2015

Brazil is experiencing its worst drought for 80 years. São Paulo, a megacity of almost 21 million people, starts to ration water as reservoirs dry up — and blackouts occur as hydroelectric power stations shut down. Water hoarding in open tanks brings mosquitoes and with them dengue fever.



CLOCKWISE FROM TOP LEFT: LOOK AND LEARN/BRIDGEMAN IMAGES; THE PRINT COLLECTOR/GETTY IMAGES; ROOSEVELT/CASSIO/REUTERS; BETTMANN/CORBIS; CORBIS