



The Ganges begins in the Himalaya Mountains. It flows southeast for 1,560 miles until it joins with other rivers and empties into the Bay of Bengal.

Saving the Ganges

The Ganges is India's sacred river. In the Hindu religion, "Ganga," as the river is called, is considered a goddess. Yet the Ganges has become one of the most polluted rivers in the world. How did this happen? What are people doing to correct the problem?

It is Saturday in Allahabad, India. A large crowd of Hindu pilgrims descends the steps of a *ghat*, or ritual bathing area, to step into the waters of the Ganges. Devout Hindus believe that a dip in the river washes away their sins. About two million people take that dip every day. Children leap happily from the bottom step, as they would at a swimming pool. Mothers bathe their infants. People wash their hair, their clothes, even their mouths in the sacred river. One elderly man scoops up water in a pot. "I'll use this for drinking and cooking and get some more tonight," he says. "It's absolutely clean. Of course it is, it's Ganges water."

The Ganges begins where a number of small streams form from melting glaciers in the Himalaya Mountains. The river flows for 1,560 miles along its southeast course to the sea. It empties into the Bay of Bengal. Indian civilization developed along its banks. About four hundred million people—a third of India's population—still live along the river and its branches. The Ganges is their main source of water for drinking, cooking, and washing. Farmers depend on the river to grow rice, beans, sugar-cane, potatoes, wheat, and other crops.

What that elderly man said about his pot of Ganges water may have been correct—once. Until the 1980s, the Ganges was a remarkably clean river. It is rich in dissolved oxygen. Disease-carrying bacteria did not live long in its waters. This was largely due to bacteria-eating viruses called *bacteriophages*. Unlike most river water, a pot of Ganges water would stay fresh for a long time. The river's self-purifying nature may be one reason why the Hindu people considered the Ganges a goddess.

Today, however, the situation is very different. The Ganges has become so polluted that it can no longer clean itself. Its waters are now unhealthy not only for drinking and bathing but for farming as well.

Ancient River, Modern Problems

The main source of pollution is untreated sewage. The Ganges flows past some of India's largest cities. In the last 60 years, India has struggled to develop a modern economy. While population and industry have grown enormously, sanitation has not kept pace. Fewer than half of India's people have modern plumbing.

Millions of gallons of sewage from more than 100 cities pour into the Ganges each day. Treatment plants can handle only a fraction of it. Much sewage does not reach the plants because many sewers are broken. Electricity sometimes goes out. Then the plants shut down, but the sewage keeps flowing. And many cities along the Ganges have no sewage treatment plants at all.

Sewage is not the only problem. Cows swim in the Ganges. People wash their laundry in it. Dead bodies and body parts drift in the water, because traditional Hindus do not bury their dead. They *cremate*, or burn, the bodies. Many Hindus ask to be cremated on the Ganges' banks. Their ashes are put in the river. But some bodies do not burn completely. And some people are too poor to buy firewood. They simply put the dead bodies of their loved ones into the river.

The pollution is very bad at Varanasi. This is a city downstream from Allahabad. To Hindus, Varanasi is the holiest of cities. Every year, millions of pilgrims bathe at its more than 75 ghats. As it enters Varanasi, the Ganges contains 120 times more disease-causing bacteria than is safe for bathing. Then it flows past 24 sewers. Four miles downstream, the bacterial count is 3,000 times the safe level. Each day, more than 1,000 Indian children die of cholera, typhoid, or hepatitis. These are diseases caused by water-borne bacteria.

There are also the factories and farms. Leather tanning, cloth making, and fertilizer manufacturing use cancer-causing chemicals that end up in the Ganges. And when farmers spray their crops to kill insect pests, these poisons flow into the Ganges, too. The life-giving Ganga has become an agent of death.

Pollution in the Ganges comes from sewage and factory and farm chemicals. It also comes from litter and garbage that people put in the river.

