

# Geography In The News™

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## CLEANING UP THE GANGES

The government of India has signed an agreement with World Bank for a \$1 billion loan to finance a clean-up operation on the Ganges River. This will be the first major new effort in more than 25 years to clean the sacred Ganges, one of the world's dirtiest rivers.

The Ganges River, also called the Ganga, at 1,557 miles (2,510 km) long, is a major river of the Indian subcontinent. It flows eastward from a large glacier in the central Himalayas, crossing northern India and Bangladesh, finally reaching its terminus at the Bay of Bengal. The world's largest delta is formed where the Ganges, Brahmaputra and Meghna rivers drain into the Bay of Bengal.

The Ganges is incredibly important to the people of India, as well as Bangladesh. The river and its tributaries drain a large basin of about 386,102 square miles (one million sq. km) and provide a perennial source of irrigation. The fertile floodplain supports agriculture that feeds one of the world's highest population densities. One-third of India's 1.2 billion people live near the river. Many of those people depend on the river and its tributaries for drinking, cooking and washing.

The Ganges supports a wide variety of agriculture, including rice, sugarcane, lentils, oil seeds, potatoes and wheat. Minor crops are legumes, chilies, mustard, sesame and jute. Indians do fish the Ganges, however, both the catch and the water are quite polluted.

India's Hindus have revered the Ganges for millennia and its symbolic and religious significance cannot be understated. They worship the Ganges, believing it is the goddess Ganga, who also maintains a personified form. In Hindu mythology, the Ganges is the embodiment of all sacred waters, and therefore to bathe in it is a holy act. Hindus believe the Ganges washes away sins and they often put the ashes of deceased loved ones into the river.

Tourism is an important activity along the Ganges. Every year, thousands of Hindu pilgrims venture to three towns in particular, Haridwar, Allahabad and Varanasi, to bathe in the river.

Unfortunately, the Ganges is one of the top five most polluted rivers of the world. Untreated sewage, agricultural runoff and industrial waste have been flowing unabated into the river for decades. Much of the pollution is caused by the staggering amount of raw human sewage that enters the river—nearly 265 million gallons (one

billion liters) per day.

At some locations, fecal coliform levels are well above what is considered safe for bathing or drinking. Human and animal remains that have been inadequately cre-

mated also add to the pollution and can often be seen floating down the river.

Thousands of industries have been built along the river over the last 50 years. Chemical plants, textile mills, distilleries, slaughterhouses and tanneries discharge untreated wastewater directly into the river. The leather factories (tanneries) of Kanpur, which use high levels of chromium and other chemicals, are especially polluting.

Furthermore, hydroelectric projects and dams reduce the river's flow in some places. A 2007 U.N. climate report predicted that the Himalayan glaciers feeding the Ganges may disappear by 2030, leaving the river as a seasonal stream fed only by summer monsoons.

In 1985, the India government, with Dutch and British support, initiated the Ganga Action Plan, the last large-scale project to address the Ganges' pollution. Many consider the Ganga Action Plan a failure, as it built some wastewater treatment plants in certain areas, but failed to halt raw waste disposal into the river. The plan's administration was criticized for misuse of money, lack of technical expertise and absence of good planning.

A new project funded with the World Bank loan will replace the Ganga Action Plan. The 2020 goal of this new project is once again to halt the discharge of untreated wastewater into the river. It will not only build treatment plants, but will focus more broadly on regional environmental health and a public education campaign.

The clean-up will likely take decades and cost many billions of dollars—much more than the \$1 billion initially loaned to the Indian government. However, at least it's a start for one of the world's most sacred rivers.

And that is *Geography in the News™*. July 15, 2011. #1102.

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Sources: Najar, Nida, "World Bank to loan India \$1B to clean Ganges River," *The Bulletin*, June 15, 2011; and [http://www.newworldencyclopedia.org/entry/Ganges\\_River](http://www.newworldencyclopedia.org/entry/Ganges_River)

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