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## Pollution impact on Ganga river and fisheries

Satyaprakash Pandey and L Prasad

Narendra Deva University of Agriculture & Technology, India

The Ganga river system, which has a total length of about 8,047 Km, is the most important river system in India and one of the largest in the world. The Ganga is a major river of the Indian subcontinent rising in the Himalaya Mountains and flowing about 2,510 km (1,560 mi) generally eastward through a vast plain to the Bay of Bengal. On its 1,560-mi (2,510-km) course, it flows southeast through the Indian states of Uttar Pradesh, Bihar, and West Bengal. In central Bangladesh it is joined by the Brahmaputra and Meghna rivers.

Today, over 29 cities, 70 towns, and thousands of villages extend along the Ganga banks. Nearly all of their sewage -over 1.3 billion litres per day - goes directly into the river, along with thousands of animal carcasses, mainly cattle.

Another 260 million litres of industrial waste are added to this by hundreds of factories along the rivers banks. Municipal sewage constitutes 80 per cent by volume of the total waste dumped into the Ganga, and industries contribute about 15 percent. The majority of the Ganga pollution is organic waste, sewage, trash, food, and human and animal remains. Over the past century, city populations along the Ganga have grown at a tremendous rate, while waste-control infrastructure has remained relatively unchanged. Recent water samples collected in Varanasi revealed faecal coli form counts of about 50,000 bacteria per 100 millilitres of water, 10,000% higher than the government standard for safe river bathing. The result of this pollution is an array of water-borne diseases including cholera, hepatitis, typhoid and amoebic dysentery. An estimated 80% of all health problems and one-third of deaths in India are attributable to water-borne diseases.

The pollutants include oils, greases, plastics, plasticizers, metallic wastes, suspended solids, phenols, toxins, acids, salts, dyes, cyanides, pesticides etc. Many of these pollutants are not easily susceptible to degradation and thus cause serious pollution problems. Contamination of ground water and fish-kill episodes are the major effects of the toxic discharges from industries. Discharge of untreated sewage and industrial effluents leads to number of conspicuous effects on the river environment. The impact involves gross changes in water quality viz reduction in dissolved oxygen and reduction in light penetration that tends to loss in self purification capability of river water.

Farakka Barrage has also resulted in occupational displacement of the fisher people in both upstream and downstream. For a long time fisher people in Bihar have been protesting against the barrage as this has hindered the natural migration of valuable fishes from the sea, especially Hilsa, a delicacy.

[satyammalia@rediffmail.com](mailto:satyammalia@rediffmail.com)