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INDIA

CASE STUDY

Town Chases Away Mosquito Menace

A city cleans its polluted lake, reducing spread of elephantiasis



Photo: USAID/Joseph Ravikumar

The low-cost, low-maintenance wastewater treatment system in Vijayanagaram uses a series of graduated ponds to clean water.

With USAID support, the city has not only established a wastewater treatment plant, but also improved water quality in the lake, eliminated the mosquito menace, and prevented fresh outbreaks of elephantiasis cases.

Challenge

“I wondered why my aunt had legs like those of an elephant and not like those of Marilyn Monroe,” recalls Tata Prakasam, a retired engineer from Chicago who was born in Vijayanagaram, a small town in southeast India. Sixty years later people in this town still suffer from “elephantiasis” (lymphatic filariasis) — a debilitating and disfiguring disease that results in swelling, most commonly in the legs. Closely related to poverty and poor sanitation, the disease is caused by parasitic worms spread by mosquitoes. The many elephantiasis cases in Vijayanagaram have been traced to polluted water flowing into the city’s Pedda Cheru Lake, a breeding ground for mosquitoes.

Initiative

As part of an exchange program, USAID brought Prakasam to India in 2003, where he met Rajat Kumar, the District Collector of Vijayanagaram. The two began discussing what it would take to clean up Pedda Cheru Lake. Later, USAID helped arrange a U.S. tour for Kumar to observe water conservation and wastewater treatment practices. He visited the Greater Chicago Metropolitan District Water Authority and met with Prakasam again. He agreed to undertake the task of cleaning up and beautifying Pedda Cheru if Prakasam would provide technical guidance, designs, and an operational and maintenance manual for an appropriate treatment system. Prakasam recommended a relatively simple, integrated pond system to treat up to 5 million liters per day of sewage.

Results

USAID helped identify a local partner to construct the treatment system. The government paid for construction, and Prakasam gave free technical support. The low-cost, low-maintenance wastewater treatment system was completed in 2004. The system uses a series of ponds to clean and filter the water — some treated wastewater is used for irrigation, the rest flows into the lake. The system has significantly improved the water and quality of life. The lakeshore now boasts parks and play areas, and the city is promoting the lake as a tourist attraction. People stroll around the lake and enjoy the clean environment, knowing that the lake is free of dangerous mosquitoes.