



## Success Stories

---

The following are a few examples of Blacksmith Institute's successful projects. For more success stories and updates, check: <http://www.blacksmithinstitute.org/success-stories.html>

### **Russia:**

#### *Popov Island, Vladivostok – Mercury contamination of water supply*

Once heavily contaminated with mercury, this neighborhood's water supply has been cleaned up with Blacksmith support. One of the most popular tourist areas of Vladivostok, Popov Island had mercury contamination over 40 times EPA limits. Hundreds of broken thermometers had been thrown into the water tank, and the mercury had leached and contaminated the supply pipes throughout the town. Blacksmith funded a joint program with local authorities to replace contaminated piping and tanks, and now the water supply is mercury free.

#### *Rudnaya Pristan/Dalnegorsk – Pollution from lead smelter*

The lead smelter voluntarily shut down after Blacksmith presented the owner with data about the health risks posed to children from lead contamination. Children's blood lead levels were tested, and those with elevated levels were treated with Blacksmith funding. This town in the Russian Far East housed one of the first lead smelters in the country, and it has left a legacy of contamination throughout the town. Blacksmith has also supported an ongoing education program for residents along with continued testing. A plan to remediate the worst of the contamination is being drafted.

### **India:**

#### *Kanpur – Hexavalent chromium in groundwater*

Blacksmith Institute pioneered the successful treatment of groundwater contaminated by hexavalent chromium in India. Hexavalent chromium, a carcinogenic, is commonly used by tanneries to preserve leather hides. Kanpur is a center of the tanning industry in India, and certain neighborhoods are contaminated to dangerous levels. The trial program, a partnership with the Central Pollution Control Board, involved injecting chemicals into the groundwater that react with the toxic hexavalent version of chromium, enabling it to bind to rock and preventing it from contaminating water. Levels of hexavalent chromium in some of the test wells have dropped to non-detectable levels. The successful process still needs to be undertaken throughout the entire site, a project that is in planning stages.

#### *Muthia Village –Soil remediation using vermiculture*

Bioremediation using a mix of worms, excavation and microorganisms have been used to clean up heavy metals from 2,750 tons of highly toxic waste in this village in Gujarat, India. Toxic waste dumped by industry in this village had polluted the groundwater, rendering it undrinkable. In partnership with local authorities and NGOs, Blacksmith helped fund a three phase clean-up, the last phase of which is the treatment of the site with vermiculture – using worms that

concentrate heavy metals in their bodies to reduce contamination in the soil. The project has been fully successful, and the site continues to be monitored by local groups.

#### **Africa:**

##### *Kabwe, Zambia – Lead contamination*

At Blacksmith's urging, the World Bank has committed significant funding to remove toxic lead from the soil in this city of 300,000 people. Legacy pollution from a lead mine has poisoned the city, rendering its population severely sick and incapacitated from chronic lead exposure. While providing independent oversight for the World Bank cleanup, Blacksmith will also continue its successful four-year old awareness program for citizens to mitigate their exposure through everyday activities.

##### *Mozambique – Leaded gasoline phase-out*

With funding and technical support from the Blacksmith Institute, the Government of Mozambique has ratified a ban on the selling and importation of leaded gasoline. Blacksmith Institute has supported this initiative since 2001 with funds and technical assistance. Blacksmith helped create the Mozambique Leaded Gasoline Task Force, made up of representatives from Mozambique's Ministry of Health, Ministry for the Coordination of Environmental Affairs (MICOEA), and the Ministry of Mines, Resources and Energy, which designed and implemented a plan to completely phase out the use of leaded gasoline by mid-2005.

#### **China and SE Asia**

##### *Cambodia – Small-scale gold mining and mercury poisoning*

Blacksmith Institute funded a scientist from Canada to help reduce mercury emissions from small-scale gold mining operations in Ratanakiri Province, where miners use elemental mercury to extract gold from ore and then burn the gold-mercury amalgam in open flames. This project successfully introduced retorts—devices to capture and recycle mercury vapors—at the Prey Meas mine and educated miners on the health risks of exposure to mercury emissions. The new technology will protect the health of miners and their families and also save them money, since they can now recycle the mercury.

##### *China – Integrated waste management planning*

The Yunnan Environment Protection Bureau has been working with the village committee of Fubao village to develop a composting and dual waste collection system to reduce pollution from agricultural chemicals, which contaminates nearby Lake Dianchi. This completed Blacksmith Institute-funded project engaged over 70% of village households, reduced the amount of waste that has to be sent to landfill by around 40%, and decreased the amount of chemical fertilizers being used.

###

#### **Press Contact:**

Magdalene Sim  
(212) 647-8330  
mag@blacksmithinstitute.org