

ARSENIC POISONING STALKS INDIA'S GOLD MINES

[NEW DELHI] Scientists have found high levels of arsenic in the soil and groundwater near a gold mine in the south Indian state of Karnataka, highlighting health hazards associated with mining the precious metal.

A team of scientists that conducted studies in the Kiradalli Tanda village of Yadgir district discovered arsenic contamination in groundwater 30 times higher than the limit of 10 parts per billion, prescribed by the WHO.

The village, which is four kilometres from a gold mine, had reported several cases of suspected arsenic-induced skin diseases and cancers.

The arsenic could have originated in mine tailings from gold extraction, the scientists said in a study published online in the *Journal of Hazardous Materials* in October.

Several villagers were hospitalised with skin-related problems. Doctors suspected arsenic in drinking water and requested us to investigate, said Dipankar Chakraborty, lead author of the study and professor at the School of Environmental Studies, Jadavpur University, Kolkata.

While some soil samples had arsenic levels 200 times the safe limit, hair and nail samples of 171 volunteers showed arsenic content exceeding the upper limit for unexposed individuals.

The report cites a 2009 study by the Karnataka state government and UNICEF which showed high levels of arsenic in groundwater samples collected from more than 800 villages in the Yadgir, Raichur and Gulbarga districts.

High levels of arsenic have been reported in former or current gold mining areas in Australia, Brazil, Canada, France, Ghana and Slovakia. Historically, mines abandoned with little rehabilitation are notorious for polluting the surrounding soil and groundwater.

Debashish Chatterjee, former deputy director-general of the Geological Survey of India, says arsenic is usually associated with the geological settings in which gold occurs.

Pradeep Sikdar, professor of environment management at the Indian Institute of Social Welfare and Business Management, Kolkata, who has worked on arsenic-based geological settings, agrees.

Arsenic is an element which indicates the presence of gold in geological settings.

So when the gold is removed as mineral, arsenic is left behind. This arsenic is washed down with water and we find it in groundwater in and around the mines, Chatterjee explained.

People living near mining areas should be supplied safe drinking water to tackle the problem of arsenic poisoning.

Source: <http://www.scidev.net/global/disease/news/arsenic-poisoning-stalks-india-s-gold-mines.html>