

Compatible mining to protect vulnerable populations and the environment

By Sara Mishamandani

The pace of mining exploration in Latin America has increased dramatically in recent decades. The [Latin American Conference on Compatible Mining](http://www.superfund.pharmacy.arizona.edu/content/latin-american-conference-compatible-mining) (<http://www.superfund.pharmacy.arizona.edu/content/latin-american-conference-compatible-mining>)

, supported by NIEHS, brought attendees from eight North and South American countries to San Luis Potosi, Mexico, to discuss and plan the future of compatible mining — a term coined at the conference.

Compatible mining is defined as the empowerment of communities, civilians, governments, and the private sector to collaborate in a way that minimizes and prevents the environmental and social impacts of mining. Talks at the meeting addressed large-scale and artisanal mining, environmental remediation, community impacts, community outreach, worker health, mining policy and decision making, and mining best practices. The University of Arizona Superfund Research Program, together with the university's Dean Carter Binational Center for Environmental Health Sciences, sponsored the Sept. 8-10 meeting.

Compatible mining in policy and industry operations

The conference established the Pan-American Hub for Compatible Mining to promote best practices for mining operations and to protect human health, the environment, and local culture. The Hub will enable networking among professionals and communities to identify and prioritize pressing issues in mining. A second meeting is planned for March 2016, in Peru.

“The concept of compatible mining is timely with the current pace of mining operations. [The University of Arizona Superfund Research Program], together with their collaborators, is well positioned to develop a hub of information exchange among the Americas,” said Heather Henry, Ph.D., program administrator in the NIEHS Superfund Research Program. “The compatible mining hub exemplifies the NIEHS strategic goal to identify and respond to emerging environmental threats to human health, on both a local and global scale.”

Putting the concepts into practice

In August, as planning for the meeting was underway, a mine wastewater spill contaminated



*The conference logo highlights the Pan-American map in the white cutout of the parrot wing, and includes the new term defined at the conference — *mineria compatible*, which translates to compatible mining. (Graphic courtesy of Fernando Diaz Barriga, Universidad Autonoma San Luis Potosi)*



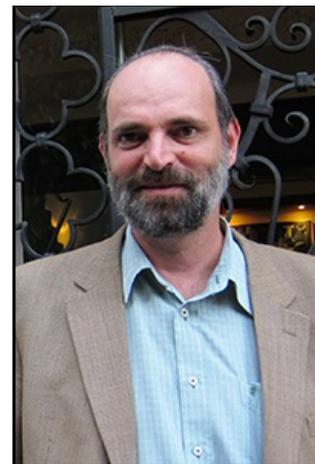
“Conference attendees discussed ways to facilitate transdisciplinary collaboration in research, information sharing, and capacity building,” said Maier, right, shown here with Henry, center, and Mary Poulton, Ph.D., a professor in the University of Arizona Department of Mining and Geological Engineering. (Photo courtesy of Heather Henry)

rivers in Cananea, Mexico. Grupo Mexico, which owns the mine, contacted a group of researchers who collaborate through the U.S.-Mexico Binational Center and the University of Arizona Center for Environmentally Sustainable Mining, to evaluate the mid- and long-term impacts of the Cananea Mine spill.

Through collaborations with the Binational Center, the university's Superfund Research Program will work together with their Mexican colleagues. They will also perform metal analysis for the estimated 12,000 samples that will be generated by these studies. This group of investigators exemplifies the vision for the Pan-American Hub to bring together multiple stakeholders to achieve compatible mining. Grupo Mexico will support studies related to water, soil, and sediment contamination, biodiversity, and human health.

"Grupo Mexico recognizes what a disaster this is and wants us to help define the extent of the contamination now and follow what happens into the future," said Raina Maier, Ph.D., the university's Superfund Research Program center director and co-organizer of the meeting. "This team would not be in place and ready to respond if it were not for the NIEHS Superfund Research Program."

(Sara Mishamandani is a research and communication specialist for MDB Inc., a contractor for the NIEHS Superfund Research Program and Division of Extramural Research and Training.)



Jim Field, Ph.D., director of the Dean Carter Binational Center (<http://binational.pharmacy.arizona.edu/node/11>) and University of Arizona Superfund Research Program project co-leader, led the conference organizing effort. (Photo courtesy of Raina Maier)



The group that will investigate the Cananea Mine spill includes professors and graduate students from the University of Arizona, the Universidad Nacional Autonoma de Mexico, Instituto Tecnológico de Sonora, and the Universidad de Sonora. (Photo courtesy of Raina Maier)



Conference attendees included representatives from industry, regulatory agencies, indigenous communities, nongovernmental organizations, and academia, as well as more than 100 students from the Autonomous University of San Luis Potosi. (Photo courtesy of Raina Maier)

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