

NETWORKING FOR ACADEMICS AND ACTIVISTS

A community that is part collaborative, part co-operative, part think tank, part utopian experiment, and all virtual: that's a rough description of the MISTICA project. An acronym for Methodology and Social Impact of Information and Communication Technologies in America, MISTICA puts digital communication to work to foster a human community.

MISTICA is officially named the Samana Network, after the city in the Dominican Republic that hosted its first meeting. It attempts to integrate information and communications resources, overcome language barriers in real time, and allow people to attend meetings on line. The network is sponsored jointly by the IDRC and the Swiss-based Charles Léopold Mayer Foundation for the Progress of Humankind. Implementing MISTICA (with help from other partners in the region) is the Networks and Development Foundation

(Fundación Redes y Desarrollo), which has promoted information and communications technology for regional development in Latin America and the Caribbean since 1988.

The two-year project's main objective is to use Internet technology in order to nurture a network of Latin American and Caribbean academics and social activists, helping them become more effective.

Community members post messages on the Web site in English, French, Spanish or Portuguese, as they prefer; and computer translation provides versions in the other three languages. The machine translations aren't perfect but they're fairly fast, allowing the near-immediate exchange of ideas. Most of the participants in this promising project are from Argentina, Venezuela, the Dominican Republic, Canada and the United States, with others from throughout South America and one user in Africa.

FIGHTING MERCURY POISONING IN THE AMAZON

People living in the Amazon suffer from the effects of mercury ingested by eating contaminated fish. For years, mercury used in gold mining was thought to be the sole cause of the contamination. Then an IDRC-funded team of Brazilian and Canadian researchers took a fresh look at the problem. To their surprise, they found another, unexpected source of mercury in the environment.

Mercury contamination (methylmercury) attacks the nervous system and the brain. Symptoms include numbness of limbs and the area around the mouth, muscle weakness, an unsteady gait, tunnel vision, slurred speech, hearing loss, and abnormal behaviour such as sudden fits of laughter. More severe poisoning may lead to general paralysis, difficulty in swallowing, convulsions and death. Mercury also cripples neural development in fetuses, and passes much more readily into the brains of young children than those of adults.

Concerned about its effects on human health in the Amazon, in 1994 scientists from Brazil's Universidade Federal do Pará in Belém and the Université du Québec à Montréal teamed up to explore the problem further. Their focus was Brazil's Tapajós River, where thousands of miners have panned for gold in the last 30 years. The team's initial research revealed the first surprise: Levels of mercury contamination were constant all along the Tapajós River, even hundreds of kilometres downstream from gold-mining operations. To find out why, IDRC provided additional funding to the team.

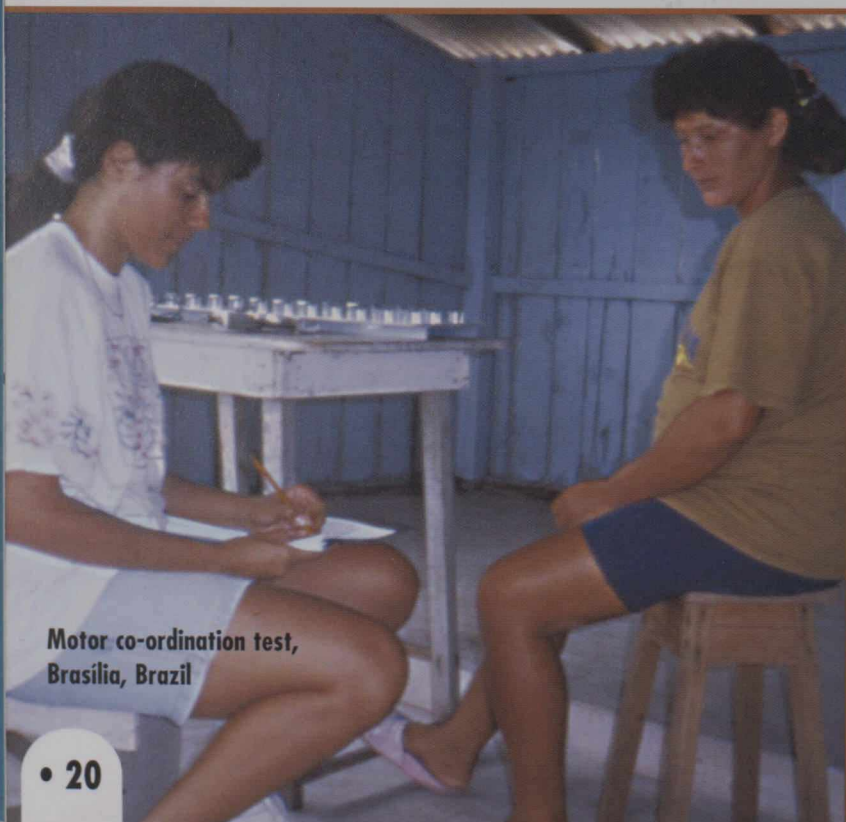
Lab test for mercury levels, village of Cometa, Brazil



Scientists collected sediment cores all along the river and measured mercury levels at every half-centimetre in each core. The most recent layers of sediment contained 1.5 to 3.0 times as much mercury as layers deposited 40 years ago, even 400 kilometres downstream from the mines. Further examination along the river bank revealed higher mercury concentrations in surface soils. The team's conclusion: the cause of mercury release from the soil was the cutting and burning of trees along the river banks, something that began 40 years ago.

Once the land is deforested, rain washes soil from the top of the banks into the river—along with mercury, which naturally accumulated in the soils for up to 100 000 years. Some areas along the Tapajós River have lost as much as 15 centimetres of surface soil. This process may largely explain the mercury increase in newly colonized watersheds of the Amazon.

photos: Jean Lebel, IDRC



Motor co-ordination test, Brasília, Brazil