

The real cost of minerals

Skyrocketing prices are fuelling a mining boom that few developing nations are ready for, says **William Laurance**

GOLD fever is upon us. As mineral prices spike, the lust for riches that once lured men to the distant Canadian Yukon and Australian hinterlands is today drawing countless thousands to remote rainforests. Thanks to escalating demands from developing and industrial nations alike, prices for gold, silver, copper, iron, tin and molybdenum have all shot up by 300 to 500 per cent in the past five years, and coal prices have doubled in the past six months.

The boom is a valuable source of income in developing nations. But it brings alarming social and environmental costs too, as dozens of developing countries struggle to control growing numbers of miners.

I recently witnessed gangs of illegal gold miners in the rainforests of Suriname, in north-eastern Amazonia. The miners were blasting at river banks with pressure hoses, devastating the ecosystem there. Once-pristine streams had become malaria-infested pools choked with sediment, the water stained bright red or yellow, and contaminated with mercury used by miners to amalgamate gold particles.

Because of such pollution, indigenous and other rural communities in many gold-bearing regions of Amazonia often cannot find clean water to drink. Fisheries are being decimated too; mercury accumulates as it moves up the food chain, reaching dangerous concentrations in the larger fish that local residents rely on for protein.

As the miners penetrate further into remote areas, they are provoking countless conflicts with local people. In northern Amazonia, the Yanomami indigenous reserve has been overrun by thousands of illegal gold miners who are poisoning streams, poaching wildlife and spreading malaria and foreign diseases to the Amerindians. Lawlessness, prostitution and armed clashes often follow, and many Yanomami have been killed. In Nouragues Nature Reserve in French



Guiana, armed gold miners drove field biologists away from their study sites and, in 2006, murdered two guards attempting to defend the park.

Even when it comes to legal mining, many developing nations are ill equipped to manage the rapid expansion of major industrial mines. For example, Indonesia, already the world's largest coal exporter, is expected to double its coal production by 2017. Much of the country's unexploited coal deposits lie in central Borneo, where mines and road networks will further open up the region to predatory loggers and thereby threaten surviving rainforest. More damage to the environment is certain, as mining corporations from the US, Australia, Russia, the Netherlands and the UK queue up to exploit Indonesia's gold, copper, tin, nickel and bauxite deposits.

Regulating industrial mining is a complex business, and few developing countries have the technical expertise and institutional capacity to do it effectively. In 1993, for instance, I visited the massive Kelian gold

mine in Indonesian Borneo and saw that the mine operator was attempting to seal off mountains of highly acidic waste from the mine, heavy with toxic cyanide and manganese, using a thin layer of clay soil. Shockingly, Indonesia's mining ministry insisted that the waste be planted over with tens of thousands of timber trees. If ever the area is logged, the clay seal will be destroyed by the bulldozers, and the acid and toxins released into nearby rivers. Although aware of the danger (it was the key recommendation in my report to them), the corporation simply complied with the directive and closed the mine.

What can be done to help developing countries deal with the upsurge in mining? First, though many nations have laws to regulate mining, enforcement is generally weak and there is little expertise in practical mining management – a serious challenge in the tropics, where heavy rains can cause massive erosion and water pollution. International aid and training are needed to improve developing nations' technical capacity, so they can better enforce their laws and limit environmental damage.

Second, more funding is vital to help regulate industrial mines and control illegal mining. Much of this cost should be covered by the multinational mining corporations, which are reaping windfall profits from soaring mineral prices. These firms are attracted to developing countries by low taxes and labour costs, modest mineral royalties and relatively lax environmental laws. They should shoulder a larger share of the burden.

Finally, we should all pay more attention to the spiralling damage caused by mining. The world's major mining corporations are headquartered in wealthy nations, and we should demand that they meet higher standards. We should support non-governmental groups that are trying to expose bad environmental and social practices. And we should lobby those who invest in international mining to use great caution, for they could be inadvertently profiting from environmental destruction. ●

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