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In China, Illegal Rare Earth Mines Face Crackdown

By KEITH BRADSHER

BAISHAZHEN, China — The elderly rice farmer was leading three outsiders into an illegal quarry to show them the gangster-run mine that has poisoned his village's fields and streams.

Suddenly, a blue Hyundai sport utility vehicle sped up to them in a cloud of red dust. A [Toyota](#) pickup pulled up behind, its windows tinted too dark to see how many people might be inside.

"Shove off!" the Hyundai driver screamed at the old man and his visitors, who included an American reporter. "We're going to carve all of you up, slaughter all of you and burn your car!"

The stooped farmer, Song Zuokai, 81, grunted and began shuffling out of the quarry with his jittery guests.

Such threats are all too common in this region of southern [China](#), long plagued by gangsters who illegally mine some of the world's most sought-after industrial metals. The gangs reap profits that can rival drug money, while leaving pollution and violence in their wake.

What is new are efforts by China's national and provincial governments to crack down on the illegal mines, to which local authorities have long turned a blind eye. The efforts coincide with a decision by Beijing to reduce legal exports as well, including an announcement by China's commerce ministry on Tuesday that export quotas for all [rare earth](#) metals will be 35 percent lower in the early months of next year than in the first half of this year.

Rogue operations in southern China produce an estimated half of the world's supply of heavy rare earths, which are the most valuable kinds of rare earth metals. Heavy rare earths are increasingly vital to the global manufacture of a range of high-technology products — including iPhones, BlackBerrys, flat-panel televisions, lasers, hybrid cars and wind-power turbines, as well as a lot of military hardware.

China mines 99 percent of the global supply of heavy rare earths, with legal, state-owned mines mainly accounting for the rest of China's output. That means the Chinese government's only effective competitors in producing these valuable commodities are the crime rings within the country's borders.

And so Beijing, intent on maintaining its global chokehold on all rare earths, has begun an energetic campaign to crush the crime syndicates that dominate the open-pit mines in this part of Guangdong Province, home to most of southern China's mining areas for heavy rare earths.

Whatever dent the crackdown may make in pollution and violence, industry executives say the effort is already putting additional crimps in global supplies of rare earths — whose exports Beijing has jealously controlled and whose prices have soared in response to rising industrial demand and a dearth of supply alternatives to China.

“We do believe that this source of supply is diminishing, and there is some evidence leakage over the border into Vietnam is diminishing,” said Judith Chegwidden, a managing director specializing in rare earths at Roskill Consulting Group in London.

Prices have soared for rare earth elements mined almost exclusively here in the red clay hills of southern China: dysprosium, terbium and europium.

According to a new [United States Energy Department report](#), the most important of these for clean energy is dysprosium. Its price is now \$132 a pound, compared with \$6.50 a pound in 2003.

Traders say illegal refineries pay outlaw miners for semi-processed rare earth ore with sacks of cash. The rule of thumb is that a cubic foot of fresh, tightly packed 100-renminbi bills is worth about \$350,000.

In the last few months, the government has deployed helicopter patrols to spot illegal mines. Teams of dozens of police officers have conducted raids into the hills of northern Guangdong and arrested at least 100 owners and managers of rare earth mines and refineries, said a Chinese mining expert who insisted on anonymity because of the issue’s political risks. Government workers equipped with blowtorches have accompanied the police to cut apart illegal mining equipment and either seize it or distribute it to peasants for sale as scrap.

Chinese officials declined requests for comment.

The gangs have terrorized villagers who dare to complain about the many tons of sulfuric acid and other chemicals being dumped into streambeds during the processing of ore. Illegal rare earth mining and chemical runoff have poisoned thousands of acres of prime farmland, according to the government of Guangdong Province, and have been blamed for many illnesses.

Besides environmental concerns, geopolitics also appears to have played a role in the crackdown. The Chinese government imposed an [unannounced embargo](#) on all shipments of raw rare earths to Japan for two months starting in mid-September, during a territorial dispute over islands. Chinese customs inspectors even delayed some shipments to Europe and the United States by demanding that buyers prove they would use the rare earths for manufacturing and not resell them to Japan.

Smuggling of rare earths to Vietnam, where Japanese traders have long been active, somewhat undermined the sanctions’ effectiveness, industry officials said.

For manufacturers dependent on rare earths, any moral or ethical implications of the crackdown on illegal mines may be too diffuse to identify. It is typically impossible to trace rare earths back to the mine where they were originally produced, industry executives say, because even legal mines frequently trade raw material with illegal ones, depending on whether the legitimate operators have met their production quotas.

The picture is further blurred by various middlemen who buy rare earth products from legal and illegal refineries alike and mix them before reselling.

Steve Dowling, a spokesman for [Apple](#), whose [iPhone](#) is among many companies’ products using rare earth components, said that his company had a code of conduct for its direct suppliers and audited them and their second-tier suppliers, and sometimes even farther up the supply chain. But he declined to comment on rare earths.

Ditlev Engel, the chief executive of Vestas of Denmark, the world's largest manufacturer of [wind turbines](#) and a growing user of rare earths including dysprosium, said that Vestas was studying the sustainability of many materials that the company buys, including rare earths.

Along with the gangster miners, the northern Guangdong refineries that buy from them are also notorious for violent behavior.

Alan Crawley, the British chief executive of Pacific Ores Metals and Chemicals, a rare-minerals trading company in Hong Kong, recalled a grisly incident at his office a few years ago, during a \$5 million business dispute with one refinery.

Someone abducted the general manager of Pacific Ores, Constant Li. The kidnappers brought Mr. Li to Mr. Crawley's Hong Kong office one night, bound him to a chair with duct tape, gagged and blindfolded him and ripped open his throat with box cutters.

A new secretary, arriving for her first day of work the next morning, discovered Mr. Li's body. "There was blood everywhere," Mr. Crawley remembered. The new secretary never came back.

Mr. Crawley said that the Hong Kong police had told him of finding images of two suspects on surveillance cameras, but the suspects fled to a lawless rare earths area here in northern Guangdong. The Hong Kong police would say last week only that their investigation of the murder continued and that no arrests had been made.

Back at the quarry, as Mr. Song slowly led his guests on foot out of the pit, their menacers followed alongside in their vehicles, with the driver of the Hyundai still screaming lurid death threats.

Mr. Song laughed mirthlessly afterward, saying the man in the Hyundai was a boyhood friend of his youngest son and hated outsiders but probably would not hurt a family friend. Mr. Song volunteered that other nearby mines were also polluting streams, but his visitors declined to visit them.

Mr. Song said he was perplexed why people far from China were so eager for the golden flecks of rare earths that dot the clay of his formerly pristine valley.

"I don't know what it is, but there's money in it, so people come and dig it," he said. The miners, he said, "are fierce because they have the money."