



Mining the Parks

The Cabinet Mountains Wilderness Area in Montana is threatened by a proposed copper and silver mine.

- 1872:** The Yellowstone Lake basin in Wyoming, Montana, and Idaho becomes the world’s first national park in the modern sense of the term. The area merits this distinction because it is home to one of North America’s most spectacular assemblages of megafauna, including grizzly bears, wolves, elk, and bison, and because it contains two-thirds of all the geysers in the world.
- 1978:** Yellowstone is declared a World Heritage Site by UNESCO.
- 1990:** Crown Butte Mining Resources Ltd. decides to site a gold, silver, and copper mine 4 kilometers (2.5 miles) from the park boundary. Park officials warn of the possibility of permanent damage to the landscape.
- 1995:** Yellowstone is placed on the *List of World Heritage Sites in Danger*.
- 1996:** The US government agrees to a land-swap with the company in order to stop the project.²⁸

Yellowstone was spared, and withdrawn from the list of endangered World Heritage Sites in 2003. Unfortunately, however, this is not a typical scenario: the mining industry has a long and dismal record of damaging officially protected natural areas. Consider the following cases, each involving an area that, like Yellowstone, has been declared a World Heritage Site.

West Africa’s Mount Nimba Strict Natural Reserve, which straddles the border between Guinea and Côte d’Ivoire, was included in the World Heritage list in 1981. In 1993, a consortium of mining companies, including BHP-Billiton and Guinea-based EuroNimba, acting in concert with the Guinean government, persuaded UNESCO to redraw the boundaries of the reserve on the Guinean side to allow for the development of an iron mine. (According to the government, the mine site wasn’t supposed to have been included in the Reserve to begin with.) But redrawing the boundaries

obviously hasn’t eliminated the danger to the Reserve. In 1999, the Global Environmental Facility (GEF), a multilateral grant-making agency run by the United Nations and the World Bank, awarded Côte d’Ivoire \$16.5 million to protect its share of the Reserve, citing mining operations in the region as among the threats the forest faced.²⁹

Indonesia’s province of West Papua (the western half of the island of New Guinea) is home to Lorentz National Park, the largest protected area in Southeast Asia. This 25,000 square-kilometer expanse—about the size of Vermont—was declared a National Park in 1997 and a World Heritage site in 1999. But as early as 1973, US-based mining giant Freeport McMoRan Copper and Gold had begun chasing veins of gold through nearby formations. This operation eventually led to the discovery of the world’s richest lode of those metals, lying close to the park boundary. The resulting open-pit mine, the Grasberg (operated by Freeport’s local subsidiary, PT Freeport Indonesia), has already ruined its immediate environment. The mine dumps 110,000 tons of tailings per day into the Ajikwa river, and by the time it closes

in 30 years, it will have excavated a 230 square-kilometer hole in the forest that will be visible from outer space.³⁰

Overall, one-quarter of World Heritage Sites listed for natural value (other Sites are listed for cultural value) are at risk from past, current, or planned mining or oil and gas drilling. (See Table.) Perhaps this threat will eventually decline as a result of the agreement reached in August 2003, in which 15 of the world’s largest mining companies pledged not to explore or mine in existing World Heritage Sites. (The agreement was brokered by an international agency, the IUCN-World Conservation Union.) There are, however, many important parks that are not on the World Heritage list and that remain vulnerable to mining. A recent analysis examined all the parks, reserves, and other official natural areas that meet IUCN criteria for “strictly

protected” (IUCN protected area management categories i-iv), and found that more than a quarter of active mines and exploration sites overlap with or are within 10 kilometers (6 miles) of such areas.³¹

Some countries are attempting to tighten up on mining incursion into protected areas. In 1999, for example, Indonesia passed a law banning open-pit mining in protected forest areas. But the government is looking for foreign investment to bolster a weak economy; it is also under intense pressure from the industry and foreign governments to override the law and grant mining permits. In July 2003, 15 mining companies were granted leases to mine in Indonesian protected areas, in apparent violation of the law. Some of these companies are signatories to the World Heritage pledge—indicating their apparent disregard for protected areas that fall outside the World Heritage category.³²

One reason that it’s difficult to keep mining out of protected areas is that the boundaries of these areas are often poorly defined. This is a common problem in some parts of the Pacific region, which has relatively few protected areas and many major mines. In the Philippines, for example, mining is prohibited in intact forests and protected areas, yet approximately a third of all mining concessions overlap with these areas. (That figure covers both exploratory and active concessions.) Vague park boundaries have contributed to this situation; another factor is uncertainty over what constitutes an “intact forest.” Papua New Guinea has a much larger version of the same problem. Nearly 90 percent of this island nation is still forested, but more than a third of its forests are already allocated to oil, gas, or mining concessions. Establishing formal protected areas has been a challenge in Papua New Guinea because most of the country’s land is owned communally. Forty-seven protected areas have been established, but even these suffer from poor management. Of the country’s highland “fragile forests,” deemed especially vulnerable to human disturbance, 26 percent now lie within oil, gas, and mining concessions.³³

There is an urgent need to stop the industry from making further inroads into protected areas, but this objective alone would not make for adequate conservation policy. That’s partly because many major ecosystem types are still poorly represented within protected areas. This is true, for example, of prairie, coastal, and marine ecosystems. It’s also because legal protection is difficult to implement on the vast scales at which nature operates. To be effective, conservation has to extend well beyond park boundaries—and for that reason, conservation is not likely to be compatible with mining as it is currently practiced. ■

Selected World Heritage Sites Affected by Metals Mining³⁴

World Heritage Site	Metal Mined
Okapi Wildlife Reserve, Democratic Republic of Congo	Gold
Mt. Nimba Strict Nature Reserve, Guinea and Côte d’Ivoire	Iron
Wet Tropics of Queensland, Australia	Tin
Southeast Atlantic Forest Reserves, Brazil	Gold, Lead
Talamanca Range, Costa Rica and Panama	Copper
Tai National Park, Côte d’Ivoire	Gold (illegal)
Sangay National Park, Ecuador	Gold
Lorentz National Park, Indonesia	Gold, Copper
Kinabalu National Park, Malaysia	Copper
Huascarán National Park, Peru	Gold
Volcanoes of Kamatchka, Russia	Gold
Pantanal Conservation Complex, Brazil	Gold (small-scale)
Doñana National Park, Spain	Lead, Silver, Copper, Zinc
Central Suriname Nature Reserve, Suriname	Gold
Bwindi Impenetrable National Park, Uganda	Gold
Kahuzi-Biega National Park, Democratic Republic of the Congo	Gold

Mining Hotspots

Thousands of metals mines now pockmark the surface of the planet, displacing communities, poisoning rivers, and ruining the lands of indigenous peoples. This map shows a small sample of the industry's activities.

Alaska: Red Dog
The world's largest zinc mine, Red Dog, is also the largest polluter in Alaska, releasing 196,000 metric tons of toxic pollutants a year.

Nevada: Carlin Trend
The mining of Nevada's Carlin Trend, the world's second largest gold deposit, has damaged Western Shoshone lands while making the state the world's third largest gold producer.

Utah: Bingham Canyon
This copper and gold mine is now the world's largest open pit, measuring 1.5 kilometers deep and 4 kilometers across. The company is responsible for mass layoffs in violation of its contract with the employees' union.

Honduras: San Martin
This open-pit gold and silver mine, run by Canada's Glamis Gold, is destroying forests and drying up local farmland. The mine consumes 1.5 million liters of water a day.

Peru: Tambogrande
A proposed gold mine was rejected by this rural community in Peru's top fruit-growing region.



Peru: Yanacocha
Residents of Choropampa, a town near the Newmont-owned Yanacocha gold mine, still suffer the effects of a mercury spill in 2000.

Argentina: Esquel
In a 2003 referendum, 81 percent of this Patagonian town's residents voted against a proposed open-pit gold mine.

Montana: Zortman-Landusky
Gold mining has destroyed Spirit Mountain, a sacred site for the Assiniboine and Gros Ventre tribes. The most recent mine was abandoned by the Pegasus Gold company in 1998, when it went bankrupt.



Romania: Rosia Montana
If built, this proposed gold mine would create Europe's largest open pit, displacing 2,000 people and destroying Roman archeological sites.

Spain: Los Frailes
A 1998 accident from this lead and zinc mine sent toxic sludge into the Guadiamar river and contaminated portions of the Doñana National Park.

Guyana: Omai
A 1995 tailings spill sent 3 billion liters of contaminated effluent from this gold mine into the Essequibo, Guyana's largest river.

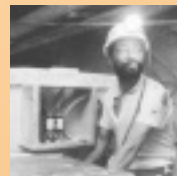
Brazil: Small-Scale Mining
Tens of thousands of small-scale miners work the Amazon region for gold, using mercury and little protective equipment.



Bolivia: Don Mario
Indigenous communities are protesting the development of this gold and silver mine in the Chiquitano Forest.

Ghana: Tarkwa
Between 1990 and 1998, more than 30,000 people in Tarkwa were displaced by gold mining operations.

South Africa
The world's largest gold producer, South Africa laid off nearly half its mining workforce between 1985 and 2000.



Mali: Syama
The first large-scale mining operation in Mali, this gold mine is responsible for extensive groundwater contamination.



Romania: Baia Mare
In 2000, the tailings dam from this gold mine spilled 100,000 metric tons of toxic wastewater, killing fish and poisoning the drinking water of 2.5 million people.

Orissa, India: Utkal Project
Proposed bauxite mines and an aluminum smelter would displace three villages in an ecologically sensitive area inhabited by tribal people. Police fired upon a public protest, killing three tribal members in 2000.

Zambia: Copperbelt
Local communities suffer from asthma, lung diseases, and other health problems caused by pollution from copper mines and smelters run by Anglo-American and other companies.

Philippines: Marcopper
This copper mine dumped 200 million tons of waste rock directly into the sea over a 16-year period.

Indonesia: PT Kelian
Hundreds of families were forcibly evicted to make way for this gold mine in Kalimantan.



Kyrgyzstan: Kumtor
Cyanide spills and worker injuries and deaths have raised concerns about this enormous, World Bank-financed gold mining project.

Mongolia: Turquoise Hill
Ivanoe's proposed copper mine is part of a mining boom in Mongolia, where the number of prospecting licenses has tripled to 3,000 in two years.

Burma: Monywa
The infrastructure for this copper mine, run by Canada's Ivanhoe company, was built by nearly a million forced laborers.

Laos: Sepon
This gold and copper project straddles a tributary of the Mekong river, threatening local forests and the traditional livelihoods of indigenous peoples.



Papua New Guinea: Ok Tedi
This mine sends 200,000 tons of waste into the Ok Tedi river each day.