
Corporations, Communities, and Conservation:

THE MOUNTAIN INSTITUTE AND ANTAMINA MINING COMPANY

D. Jane Pratt

In the late 1990s, The Mountain Institute (a small, nonprofit environmental organization) began working with the Antamina Mining Company (one of the world's largest mining companies) to help it revise its plans for a large zinc and copper mine. The collaboration produced an alternative design that not only protected a fragile ecosystem, but will prove more cost-effective over the life of the project than the firm's original plan. This article explains the important role that financial institutions played in enabling The Mountain Institute to engage Antamina's attention and establish its credibility as a source of objective expertise for and valuable partner in the mine planning and development process. The case raises issues that corporations, government policymakers, and environmental organizations must resolve for such collaborations to succeed over the long term.

The Mine

In 1998, Antamina, a Peruvian mining consortium of companies from several developed countries, completed its feasibility study and began to develop what will become one of the world's largest mines. It is scheduled to reach full production in 2002, which the UN has coincidentally designated as the International Year of Mountains to draw attention to the development challenges facing fragile mountain ecosystems. At this point, and for the 20-some years of projected mine life, Antamina will be the third largest producer of zinc, the seventh largest producer of copper, and the third largest producer of ore concentrates.

The site, at elevations between 4200 and 4700 meters above sea level, is located on the eastern side of the Andes, 380 kilometers northeast of Lima and

CONTRIBUTORS

Derek Davison is a consultant at the Center for Economic Development in Pittsburgh, PA. He is the co-author (with Richard Florida) of "Why Do Firms Adopt Environmental Management Systems (And Do They Make a Difference?)" in Cary Coglianese and Jennifer Nash, eds., *Regulating From the Inside: Can Environmental Management Systems Achieve Policy Goals?* (Resources for the Future Press).

Nicole DeHoratius is a doctoral candidate at the Harvard Business School in the Technology and Operations Management Area. Her research focuses on issues critical to the effective management of supply chains with a particular emphasis on improving the performance of retail organizations. In the fall of 2001, she will be joining the faculty at the University of Chicago.

Magali A. Delmas is an Assistant Professor of Business Strategy at the Donald Bren School of Environmental Science & Management at the University of California, Santa Barbara. She previously worked at the European Commission at the Directorate for Industry. Her research focuses on the interaction between regulation and firms' competitive strategies and how alternative forms of environmental regulations, such as voluntary agreements and self-regulation, can affect firms' competitive advantage.

Richard Florida is co-director of the Software Industry Center and the H. John Heinz III Professor of Regional Development at the Heinz School of Public Policy and Management at Carnegie Mellon University. He is co-author (with Martin Kenney) of *Beyond Mass Production* (Oxford University Press) and *The Breakthrough Illusion* (Basic Books) and co-editor (with Lewis Branscomb and Fumio Kodama) of *Industrializing Knowledge* (MIT Press).

M. Eric Johnson is an Associate Professor at the Tuck School of Business at Dartmouth College. His teaching and research focuses on the impact the web is having on supply chain management and he has published articles on e-fulfillment and B2B integration in *CIO Magazine* and *Supply Chain Management Review*. He has also published in *Management Science*, *Operations Research*, *IIE Transactions*, and *Transportation Science*. He is the author of *Supply Chain Management: Innovations for Education*.

D. Jane Pratt is President and CEO of The Mountain Institute, an international organization devoted to conservation of mountain ecosystems and sustainable development. She previously held various executive positions at the World Bank and was Group Leader for Environmental Assessment and Strategy at the MITRE Corporation. She serves on several corporate and nonprofit boards.

Lynelle Preston is an MBA candidate at Haas School of Business and co-president of the Haas chapter of Net Impact, a national network of MBA students wanting to use business to create a better world. She has been working in the environmental nonprofit sector for over seven years, including The Mountain Institute and the World Wildlife Fund. She will be joining Hewlett-Packard as the Sustainability Special Projects Manager.

Ananth Raman studies and teaches supply chain management at the Harvard Business School. His research focuses on supply chain management for short lifecycle products with unpredictable demand, and emphasizes production and inventory planning, the role of incentives, and the importance of operational execution. He is co-director of Consortium for Operational Excellence in Retailing, a research consortium that involves over 30 leading retailers and researchers from multiple universities.

east of the Cordillera Blanca range. This remote and rugged area is home to impoverished indigenous communities of Incan descent, many of whom speak only the Qechua language. The environmental significance of the region was recognized by the creation of the Huascarán National Park, which lies between where the mine is sited and the coastal area from which ore is to be shipped to international markets. The Huascarán is of such biological and cultural importance in fact that it enjoys three levels of protection: it is a National Park; an International Biosphere Reserve under the Man and the Biosphere Program of the United Nations Educational, Scientific, and Cultural Organization (UNESCO); and a World Heritage site.

Initial plans called for the ore to be shipped by road over the Andes to a port on the Pacific. The initial plans also called for the road to go through the Huascarán National Park over a pass over 3,000 meters high. The proposed road would have disrupted the habitat of several endangered species, including the extremely rare *puya raimondii*—at nearly 40 feet high, it is the world's tallest flowering plant.

The mining company's environmental officials stated that they had the requisite permissions and waivers from the highest levels of government to proceed and claimed that their environmental assessment had been prepared according to World Bank standards.

The Mountain Institute

Many leading local officials and civil society groups were opposed to the road through the park. They had little recourse, however, for several reasons: the government supported the project because, among other things, it had huge potential to generate needed foreign exchange and jobs at a time of serious economic crisis; and local people lacked both the access and technical expertise necessary to mount a credible opposition.

The proposed road traversed areas where The Mountain Institute (TMI) supports projects in collaboration with the Park authorities and local communities. TMI is an international non-governmental organization (NGO) supporting global networks as well as range-based programs in the Himalayas, Appalachians, and Andes. Its mission of protecting mountain environments and strengthening mountain cultures is measured in its ability to conserve mountain ecosystems, strengthen livelihoods for mountain communities, and promote education and advocacy on mountain issues. Globally, mountains are home to nearly half of the world's biodiversity "hot spots" and provide some 60-80% of the world's fresh surface water.

The Mountain Institute, based on its extensive experience and technical expertise in mountains, tried to convince the company to use alternatives to the road through the Park. Senior staff participated in the public comment period on the Environmental Impact Assessment (EIA). TMI suggested to Antamina

that alternative options were in its own economic interest: running 35 to 50 ton trucks over high passes would entail high maintenance and fuel costs and risk disruption if any of the trucks broke down on the narrow road, since departures were scheduled at four-minute intervals around the clock. An alternate route around the park that was 17 km longer but stayed below 10,000 feet, or a slurry pipeline in place of the road were included as addenda in the company's environmental assessment, but both were initially rejected as too costly or time consuming. The company also emphasized that its EIA, on which it had spent over \$1 million, covered all those concerns adequately.¹

TMI then arranged a meeting with the financial group backing the mine, Rothschild, N.A.—the financial syndicate representing major investment banks from the United States, Canada, Japan, and Germany. TMI stressed its interest in constructive dialogue to make sure that the local environment and interests were respected while at the same time recognizing the importance of mining development for employment and income generation. TMI stressed its role as a technical and field-based conservation and development organization, not as an advocacy group. It emphasized that it would not try to mobilize public opposition to the mine. However, TMI pointed out that implementing the plan for a road through the Park would result in the Park's automatically being placed on the global "Endangered Parks" list, and it would then be monitored closely by environmental groups everywhere. Other NGOs, once they learned of the threat to the protected areas, would protest strongly in the countries of the headquarters of the financial institutions.

In the end, TMI explained, such protests would delay but probably not stop the project. The delay, however, would activate penalty clauses in the mining company's contract with the government, and the penalties would be substantial. This new perspective led the consortium to rethink its plans and to reroute the road around the park. It eventually opted for the slurry pipeline around the park. In the long term, this choice involved more up-front costs and took longer than initially predicted (although the costs and time involved for the road through the Park might well have been simply underestimated), but it will prove financially preferable over the life of the project. The company, however, had spent over \$1 million on an EIA that concentrated its analysis on a road that proved both legally unfeasible and environmentally undesirable.

Lessons Learned

The first lesson is recognizing the value of preventive rather than corrective actions. Much time and money would have been saved if Antamina had seen the value of open discussions with locally based stakeholders early on. This is a case where the financial institutions and the mine should have applied international environmental and social standards from the beginning, rather than trying to find an expedient way to avoid compliance. Mines are always a potential threat to the environment and represent high-risk, long-term investments.

There are many cases where the environmental damage locally—and often far downstream—has been substantial and costly to the investors. In this case, application of environmental and social standards as well as collaboration with local and international NGOs from the beginning could have saved the mining company close to a million dollars in the initial development work and would have eased relations with the local inhabitants (relations that remain tense over a number of other social and environmental concerns). The criterion to respect local biodiversity and sustainable land use would have required that the ore shipments go around the national park. In this case, that turned out to be the preferred option in the long run. Even though it involved more expensive front-end costs, that was preferred by the financial backers of the project to meet their own sustainability standards.

Such a decision early on would have avoided putting the company in a situation where it needed to meet unrealistic financial performance expectations, when a realistic assessment would have generated a more than satisfactory yield. In this case, it would clearly be desirable for similar requirements to be applied to the entire sector in Peru (and elsewhere). Antamina is one of the most environmentally responsible mining firms in the region and is facing competition from others whose environmental consciousness is far weaker. Requiring application of international standards would place all mines on an equal footing, to the long-term benefit of the country, its people, and the mines' financial backers.

This example also demonstrates several important lessons for the “greening” of industry:

- Sustainability factors should be taken into consideration for both for the sake of the firm's reputational interests and its long-term financial benefit.
- Adherence to international standards can lead to superior solutions from a financial point of view as well, if the project is analyzed in a holistic manner.
- It is important for financial investors to have access to independent information when assessing compliance with environmental standards, either from reliable third parties or from internally developed capacity, as they do for financial analysis.

While the above analysis suggests some criteria that can be used to promote sustainability, the Antamina development also raises additional issues companies and environmental nonprofits need to address when working together to develop plans that simultaneously minimize economic impacts and economic costs to the mutual advantage of the corporations, local communities, and natural ecosystems. First, this highly unequal power relationship between a small nonprofit and a mega-corporation had a successful outcome because TMI was able to offer a broader perspective and more objective advice than the consulting firm hired to carry out Antamina's EIA. TMI was able to contribute a substantial

level of technical expertise, giving the company a positive value-added to the transaction cost-benefit equation, because it succeeded in “leveling the playing field” with the corporation by engaging the attention and support of the financial institutions funding Antamina. Without the support of Antamina’s financial backers, TMI probably would not have succeeded in getting Antamina to take its expertise seriously.

Second, this episode illustrates the risks corporate managers take basing decisions on the information provided by conventional consulting firms. It is extremely common for both governments and corporations to hire consulting firms to carry out EIAs. Unfortunately, the EIA-for-hire dynamic of such consulting relationships gives incentives for the contractor to send the messages that it thinks the employer wants to hear. This, plus the consulting firm’s relative lack of familiarity with local social and environmental conditions, compared to nonprofits with years of experience in the area, creates impediments to industry’s receiving the best advice. This is often very problematic where harmful environmental impacts are concerned, especially when the best advice challenges popular preconceptions about the costs and benefits of minimizing environmental impacts. While TMI was in a position to provide superior information to that of the consultant, it was able to engage the corporation in serious discussions only by first engaging the attention of the firm’s financial backers in a credible way and leveraging their influence with Antamina.

Third, and most difficult, while TMI was strongly motivated by its mission to work with the company, it did not have financial means or incentives to continue working with Antamina. It could not enter into a conventional consulting relationship with the firm. Indeed, accepting money from Antamina would have compromised its reputation as an objective and independent partner, and it would have compromised its credibility with the surrounding communities. Even more important, TMI, like most NGOs, is funded by grants from international donors who expect their money to be spent only for the programs for which the grant was given and not to subsidize the environmental and social responsibilities of the private sector. In the absence of normal market incentives, other strategies are needed to bring all stakeholders to the table and to make it economically feasible for them to work together over a long period of time in order to address recurring issues as they arise.

What Next?

For such corporate-NGO partnerships to work from respective strengths and to mutual advantage, partners need to be able to listen and learn from each other. TMI’s experience is that the most effective learning takes place at the edges of challenge, whether physical, experiential, or intellectual. This partnership has a lot of that kind of challenge and so is an unusually good incubator for new learning. For such partnerships to work, both sides must also recognize that mechanisms are needed that allow nonprofits to be compensated for their-

legitimate contributions that help corporations to avoid and mitigate adverse social and environmental impacts of development. TMI and Antamina have begun to work towards this goal. They have developed an innovative “Consortium for Mining and Environment” (CME) proposed by TMI. CME unites NGOs and civil society representatives working in and knowledgeable about the region, and it identifies priority actions to deal with environmental and social priorities of local communities. With funding from several mining interests in the area, and a decision-making structure independent of the companies, the hope is to create an entity that can provide objective technical advice, bring stakeholders to the table, and help corporations fulfill their sustainability objectives in an efficient and effective manner on a long-term basis.

Notes

1. In fact, the EIA was not up to World Bank standards as claimed. It had been commissioned by Antamina to justify the project. It happens that the head of TMI had previously headed the World Bank’s Environmental Operations and Strategy divisions and as such had been closely involved in designing the EIA process and knew exactly what would have constituted an acceptable EIA.