

Environmental Safeguards and Community Benefits in Mining: Recent Lessons from the Philippines

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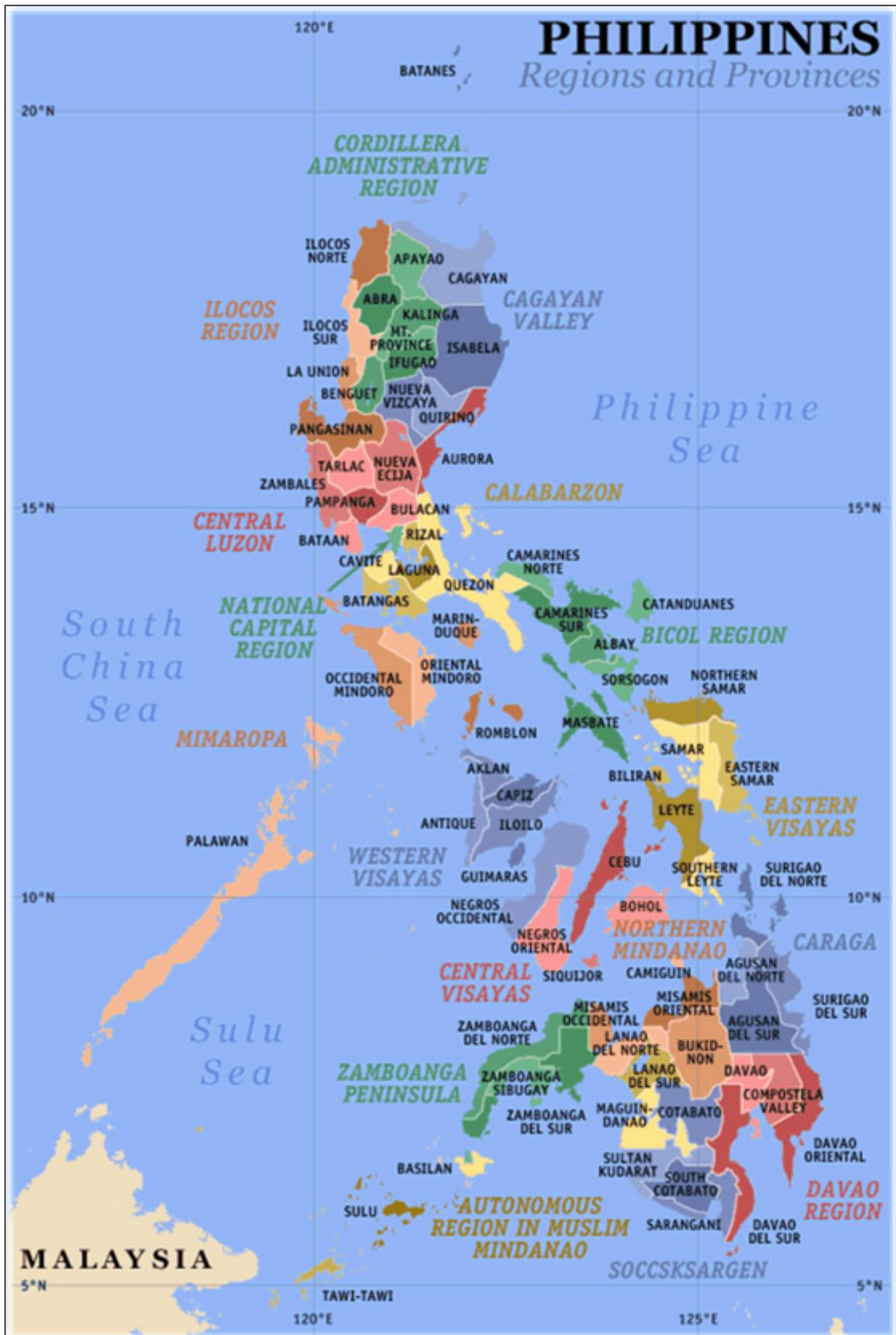
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Source: <http://en.wikipedia.org/wiki/Philippines>.

Introduction

In October 2005, the Foundation for Environmental Security and Sustainability (FESS) and the Croft Institute for International Studies at The University of Mississippi launched an environmental security assessment of the Philippines. FESS has developed the Environmental Security Assessment Framework (ESAF) as the methodology used for such assessments. The framework is structured to identify risks to nations and regions that arise as a result of the confluence of environmental and political, economic, and societal factors, and to evaluate the implications of these risks. The goal of the ESAF is to inform policymakers, facilitate the establishment of priorities, and contribute to the development of effective and sustainable policies in the public and private sectors.

The concept of “environmental security” is relatively new, and there are a number of competing definitions and varying interpretations of the term. In its work, FESS employs the following working definition:

- *Environmental security* is a condition in which a nation or region, through sound governance, capable management, and sustainable utilization of its natural resources and environment, takes effective steps toward creating social, economic, and political stability and ensuring the welfare of its population.

In the fall of 2005, the FESS-Croft research team met with nearly 80 government officials, elected representatives, civil servants, military personnel, policy experts, academics, civil society professionals, and private sector representatives in Manila and several different provinces, including Benguet, Capiz, Davao del Sur, Misamis Oriental, Negros Oriental, and Palawan. Based on this first round of meetings, the research team decided that the study would focus on mining as the most significant sector for the future of environmental security in the Philippines.

The emphasis on mining resulted from several findings from the first round of interviews:

- In the context of the troubled history of mining in the Philippines, the “fast-track” approach reflected in the push by President Gloria Arroyo and the Department of the Environment and Natural Resources (DENR) to encourage a rapid increase in large-scale mining investments alarmed many communities and appeared likely to generate conflict.
- The credibility of and trust for mining companies and the relevant government agencies was extremely low in all regions visited. In fact, in private interviews local officials were even more skeptical of statements by firms and the DENR than in public.
- The DENR was seen as ineffective and subject to capture by powerful political and economic interests.
- Although leaders of the highly influential Catholic Church expressed a variety of positions regarding the extraction of natural resources, Church leaders in localities with mining operations were often active opponents of extractive industry initiatives.
- The rapid opening of the mining sector to large-scale foreign investment seemed to portend a possible paradox: Quick-hit investments might lead in the medium term to negative environmental and social consequences, community-based protests and conflict, and a *net reduction* of foreign direct investment.

In February 2006, the FESS-Croft team returned to visit mine sites and/or conduct interviews in Albay, Benguet, Manila, Palawan, Sorsogon, Surigao del Norte, and Zamboanga del Norte. In meetings with government officials, company representatives, NGO staff, and Catholic clergy, a number of basic questions were explored:

- Is the opening of the mining sector to foreign investment likely to improve significantly the financial profile and debt situation of the Philippines?
- What is the potential of the mining sector to alleviate poverty, provide employment, and enhance the social welfare of communities? What are the associated environmental and social risks?
- How is the opening of the mining sector likely to affect the interests of indigenous groups?
- Will mining significantly increase revenues available to local communities?
- Will mining lead to significant positive economic spin-off effects, such as downstream economic activities and diversification of the economy?
- How can communities be better incorporated in decision making involving mining issues?
- What practical actions can be taken by both public and private actors to avoid or mitigate any negative effects of mining on social peace, environmental conditions, and the economic well-being of mining communities and surrounding areas?
- How can the rhetoric of “responsible mining” be turned into a reality that engenders the confidence and trust of mining communities and surrounding areas?

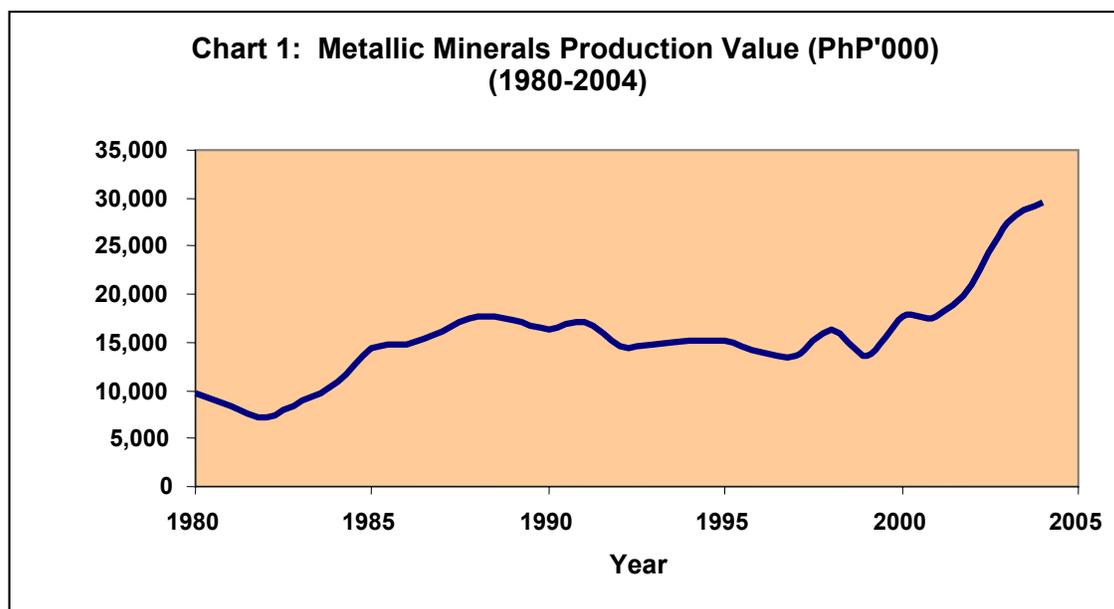
The Troubled Legacy of Mining in the Philippines

Background

Many of the 7,000-plus islands of the Philippine archipelago sit on underwater volcanic mountains formed by molten rocks from the earth’s center. The molten rocks are rich in minerals, and have left large mineral deposits scattered throughout the country (Lyday 2002). In terms of metallic minerals, these include: 1) precious metals (gold, silver, platinum); 2) base metals (copper, lead, zinc, mercury, cadmium); 3) iron alloys (chromite and nickel); 4) light metals (bauxite and manganese); 5) iron; and 6) rare metals (uranium) (Mines and Geosciences Bureau n.d.a).

In terms of estimated value, the country is richest in nickel (Ni), gold (Au), copper (Cu), and chromite (Cr). Based on density of deposits per one-square-kilometer land area, the country is ranked third in the world in gold deposits, fourth in copper reserves, fifth in nickel, and sixth in chromite (*Business World* 2005).

The large-scale production of the chief metallic minerals in the Philippines has experienced fluctuations of varying magnitudes in recent decades. There was a boom from 1982-1988, a slow decline from 1988-1997, followed by a moderately erratic pattern from 1997-2000. In 2000-2001, there was a slight fall, followed by a steady increase through 2004 (see Chart 1).



Source: Mines and Geosciences Bureau n.d.d; Congressional Planning and Budget Department 2005.

There were boom periods for specific metals: gold mining prospered in the 1920s and the 1930s; copper experienced a rush in the 1950s and the 1960s; and nickel became an important metallic mineral product in the 1970s. The decade of the 1970s was the “busiest for the mining industry as old dormant gold mines were reopened, new gold projects developed, existing copper mines expanded, and new copper projects undertaken” (Lopez 1992).

The surge in the mining industry was driven by high prices for copper and other metals in the world market. By 1980, the country had about 45 operating mines contributing over 21 percent to the total exports of the country (Cabalda et al. 2002).

What followed was a continuous decline of the Philippine mining industry, in spite of multiple government schemes to reverse the trend. The decline of the industry reflected lower global demand for metals, the depletion of operating ore reserves, and the heavy debt of the industry (Congressional Planning and Budget Department 2005).

The measures taken by the government to save the industry were multiple, but their successes were minimal. Between the early 1980s and the end of the 1990s, copper production had dropped by 90 percent as a result of multiple mine closures.¹ The production of nickel and gold, however, increased.

Even during the mining boom, the contribution of the mining industry as a share of GDP was never much more than 2 percent. This share has been hovering near 1 percent in recent years. Yet, there is considerable potential for future growth (Cabalda et al. 2002).

The mining industry saw a jump in formal employment from the 1970s to the 1980s, with a drop of less than 10 percent in the 1990s. In terms of absolute numbers of those employed in mining plus quarrying, the figure was 160,000 at its peak in the late 1980s (Congressional Planning and Budget Department 2005).

This represents direct employment generated by the mining industry. The indirect employment generated from mining, according to the Chamber of Mines of the Philippines, could be four to ten additional jobs per mining job created. There are an estimated 400,000 to 500,000 people engaged in the “backward and forward linkages to the industry” (Israel and Asiro 2000). According to the Senate Economic Planning Office, potential indirect employment from the current 23 priority mining projects envisioned by the government could amount to 136,000 jobs. Indirect employment is projected to occur in related industries such as construction, materials, supplies, and services (Bakshian 2006).

As for small-scale mining in the Philippines, estimates range from 186,000 to 250,000 miners engaged in this work (Israel and Asiro 2000). Thus, it appears that the impact on direct employment of small-scale mining, as precarious and environmentally damaging as that activity may be, is at least as great as the formal mining sector. As in many other developing countries, the Philippines faces a significant challenge in improving the lives of small-scale miners, their families, and their communities (World Bank/FESS 2005).

Legacy Mines and Mining Accidents

There are several hundred abandoned mines of varying sizes in the Philippines. Many local communities believe these mines have had a negative impact on the environmental quality and the health of the people living around them. Among these mines are the Hixbar Open Pit mine (Rapu-Rapu, Albay), Marcopper mine (Marinduque), Basay Copper mine (Negros Oriental), Thanksgiving Gold mine (Benguet), Black Mountain Copper mine (Benguet), Boneng-Lobo Copper mine (Benguet), and Palawan Quick Silver mine (Puerto Princesa) (Philippine Indigenous Peoples Links 2003).

In addition to the problem of abandoned mines, there have been a number of highly publicized mining accidents. Together, these have helped paint a most negative image of large-scale mining in the minds of many Filipinos.

Among these mining accidents are three cases associated with Manila Mining Corporation. In July 1987, there was a dam failure resulting in a spill of an unknown quantity of cyanide tailings causing fish kill in Placer, Surigao del Norte. In September 1995, a dam foundation failure at tailings pond no. 5 of the Placer copper-gold project occurred due to heavier than normal rainfall. The 50,000 cubic meters of released tailings led to coastal pollution that was connected by some residents to the death of 12 people. Then in April 1999, yet another tailings spill from a damaged concrete pipe in tailings pond no. 7 occurred, again due to heavy rains. This resulted in the release of about 700,000 tons of cyanide tailings and the burial of 17 homes. Manila Mining Corporation paid compensation for some of the damages and helped relocate affected families. However, there remain a number of outstanding community claims. In 2003, Manila Mining Corporation stopped operations. However, recently a successor firm has been in discussions to reopen the mine (Philippine Indigenous Peoples Links 2003; Authors’ Interviews 2006²).

Over the span of more than half a century, the Lepanto Consolidated Mining Corporation has been polluting the Mangkayan-Abra River system and deforesting surrounding watershed areas. In the 1960s, the collapse of Lepanto tailings dam no.1 caused a tailings spill onto the rice fields of Lipa-an, Paco. In 1986, there was a collapse of tailings pond no. 3 due to a break in the dam embankment, leading to siltation of the Abra River and affecting nine municipalities. In 1993, the same tailings dam collapsed again. More recently, in July 1999, heavy rains caused a massive land subsidence in Colalo that buried an entire elementary school building, resulting in the death of one resident and displacing a number of families not employed by the mining operations (Palaganas 2004). The incident has since been referred to as the “Lepanto fault.” Since that time,

both civil society organizations and the provincial governor have expressed concerns to Lepanto over continuing pollution from heavy metals (Authors' Interviews 2006³).

In Philex Mining Corporation's operation at Padcal, Benguet, a collapse of a dam wall at tailings pond no. 2 occurred in 1992 due to a weakened foundation caused by an earthquake two years earlier. Some 80 million tons of tailings were released, causing heavy siltation in the irrigation system downstream. The company paid Php5million to the affected farmers. Philex Gold Philippines, Inc., in which Philex Mining holds an 81 percent share, experienced accidents in both Negros Occidental and Zamboanga del Norte. In the case of Negros Occidental, in 1995, the pressure of impounded tailings caused a leak in the decant tower of tailings pond no.1 at the Bulawan gold mine, resulting in siltation in the Sipalay River. In the case of Zamboanga del Norte in 1997, heavy rain led to a dam overflow at the Sibutad gold project, leading to fish kills (Philippine Indigenous Peoples Links 2003; Authors' Interviews 2006⁴).

The operations of Atlas Consolidated Mining ceased in 1994 but, in 1999, an outlet in a drainage tunnel of an open pit was clogged, resulting in a pressure build-up that loosened the accumulated silt, and causing the discharge of an estimated 5.7 million cubic meters of acidic water into the Sapangdaku River, which flows into the open sea. This led to an increase in the acidity of the affected water bodies and fish kill. The company was assessed a fine equal to US\$210,000 for exceeding effluent standards; charges of violating the Water Pollution Law filed with the Pollution Adjudication Board are still pending (Cabalda et al. 2002).

Other such instances could be mentioned. But one mining disaster that has taken on mythic proportions in the Philippines and is invariably mentioned by citizens and government officials alike is Marcopper mine on the island of Marinduque. Through the 1970s and 1980s, Marcopper mine tailings were dumped into Calancan Bay, damaging the local fishing industry. Marcopper was mandated to pay for a Calancan Bay Rehabilitation Program. In 1982, a dam failure led to the inundation of agricultural land with tailings up to 1.5 meters in depth. In December 1993, the Maguila-guila siltation dam collapsed, causing the death of two children, lost livestock, and the flooding of downstream communities (Philippine Indigenous Peoples Links 2003).

The greatest disaster, however, occurred in March 1996, when a cement plug in an open pit drainage tunnel burst and millions of tons of tailings filled the Makulaquit and Boac river systems. Five villages had to be evacuated, and an estimated 20,000 villagers were affected (UNEP 1996). Damages have been estimated at US\$80 million or higher (UNEP MRF). The government of Marinduque sued Placer Dome, a Canadian company that had a 40 percent share in Marcopper, for US\$100 million (Aglay and Ferrer 2005). The experience of Marcopper in Marinduque led to a moratorium on mining in several provinces, including a 25-year moratorium in Marinduque, a 25-year moratorium in Mindoro Oriental, and a 15-year moratorium in Capiz.

These mining incidents and the lingering issues surrounding abandoned mines, in combination with a continuously growing public awareness of similar concerns in mining communities in other parts of the world, have led to a growing constituency against large-scale mining in the Philippines. This constituency is represented by indigenous peoples' organizations, environmental and legal rights groups working with local communities, local political leaders, and the Catholic Bishops Conference of the Philippines.

The 1995 Mining Act

On March 3, 1995, President Fidel Ramos signed into law Republic Act 7942, the Philippine Mining Act. The Act was an effort to address some of the problematic issues of mining from the past, including a lack of respect for the rights of indigenous peoples, the failure to include local and regional governments in revenue sharing, and insufficient environmental and social requirements of mining operations. It embedded provisions on mining rights, incentives, government shares, social responsibilities, financial responsibilities, and environmental responsibilities. Its initial passage was immediately hailed by the Chamber of Mines of the Philippines. However, the Act was opposed by environmentalists, social activists, and indigenous peoples' organizations (Rovillos 2003).

At the center of the controversy was the Financial or Technical Assistance Agreement (FTAA) provision that allowed 100 percent foreign control over large-scale mining operations. The Legal Rights and Natural Resource Center (Kasama sa Kalikasan or LRC-KSK) contended that the FTAA was unconstitutional since it violated Article II, Section 2 of the 1987 Constitution, which provides that the FTAA is an agreement for mere assistance, either technical or financial, in the development of mineral resources (Cabalda et al. 2002). This became the chief argument against the Act among its opponents. Some organizations accused the government of selling the patrimony of the Philippines to foreign capital (Authors' Interviews 2006⁵).

In 1997, environmental groups filed a petition with the Supreme Court to seek a ruling that the FTAA and the Mining Act of 1995 were unconstitutional. What followed was seven years of deliberation and indecision on the part of the Supreme Court. On January 27, 2004, by a vote of 8-5 with one abstention, the Supreme Court declared that the Mining Act indeed violated the Constitution.

Subsequent to that declaration, proponents of the Act stated that the Supreme Court decision nullified only those provisions having to do with the participation of foreign firms in local mining operations, while the rest of the Act was still enforceable. In the meantime, the proponents filed a motion for reconsideration with respect to the FTAA provisions through the Office of the Solicitor General.

In December 2004, the Supreme Court reversed its earlier decision by a vote of 10-4 with one abstention (Mines and Geosciences Bureau 2004). Thus, the 1995 Mining Act, including its FTAA provisions, was declared constitutional by the highest court in the country.

However, problems in the mining sector have not ceased to occur (the most significant being the Marcopper disaster, which occurred right after the initial passage of the law). Nor have the abandoned or legacy mines been systematically addressed. The legislative progress represented by the mining law has not been sufficient by itself to eliminate improper mining practices in the country.

The Mineral Action Plan

When President Gloria Arroyo came to power in 2001, the Philippine economy had a host of problems, including very weak foreign investment and a huge external debt that equaled nearly two-thirds of GDP (UNPAN 2002). The mining sector was the most obvious candidate to bring in large investments, but this possibility was constrained because of the court cases involving the FTAA provisions of the Mining Act. Nevertheless, a Mineral Action Plan was developed in late 2004 to try to revitalize the mining industry.

When the Supreme Court ruling opened the sector to 100 percent foreign investment, the Arroyo administration immediately began to vigorously promote mining in the Philippines. In January 2005, DENR Secretary Michael Defensor traveled to China to court investments, noting that the government had identified 23 priority mining areas that were projected to bring in \$US6 billion within the next six years (Mines and Geosciences Bureau n.d.b).

Executive Order (E.O.) No. 270, issued on January 16, 2004 and amended on April 20, 2004, was meant to provide the underlying principles and priorities in the pursuit of revitalizing the Philippine minerals industry. These principles were based on the goals of promoting sustainable development and ensuring responsible mining.

For the implementation of the provisions of E.O. 270, on September 13, 2004 the Office of the President directed the Department of Environment and Natural Resources to formulate an action plan. The outcome was the Minerals Action Plan (MAP), which was crafted by interagency working groups and delineated 12 basic tenets. The MAP was subjected to public consultations and incorporated most of the comments of other government agencies, the minerals industry, and civil society organizations.

The plan's tenets covered both environmental concerns and social considerations, although the order in which these tenets were given appeared to give highest priority to stimulating increased investments in the mining sector. They were as follows:

- The critical role of investments;
- Clear, stable, and predictable investment and regulatory policies;
- Value-adding;
- Promotion of small-scale mining as a formal sector;
- Use of efficient technologies;
- Protection of the environment;
- Safeguarding the ecological integrity of areas affected by mining;
- Multiple land use and sustainable utilization of minerals;
- Remediation and rehabilitation of abandoned mines;
- Equitable sharing of economic and social benefits;
- Sustained information, education and communication (IEC) campaign and respect for the rights of indigenous peoples (IPs) and communities; and
- Continuous and meaningful consultations with stakeholders.

For its medium term goals, which were set for six or seven years from 2004, four urgent tasks were identified along with the corresponding strategies and responsible government agencies for implementing the strategies. The four areas of concern were:

- Promotion of investments in the minerals industry;
- Promotion of greater public confidence in the minerals industry;
- Promotion of greater public acceptance of the minerals industry; and
- Promotion among the industry's stakeholders of open and transparent communication (Mines and Geosciences Bureau n.d.c).

There have been two common criticisms of the MAP: 1) the guardian of mineral resources, the Department of Environment and Natural Resources, is given the conflicting dual role of promoting mining and safeguarding the integrity of the environment and natural resources, and

2) there is a lack of attention to problems of weak governance, including the enforcement of rules and regulations pertaining to mining.

Three Recent Cases

There is a tendency toward polarization in the debate over mining in the Philippines, with those engaged in the debate often adopting either uncompromising anti-mining positions or uncritical pro-mining rhetoric. Our field research has found, however, that there is a broad spectrum of mining practices that cannot be fully encompassed by such a dichotomy. Three cases that reflect various points along that spectrum are the Lafayette Philippines Inc. mine in Rapu-Rapu, Albay, the TVI Resource Development Philippines Inc. mine in Canatuan, Zamboanga del Norte, and the Coral Bay Nickel Corporation processing operation in Bataraza, Palawan.

The Rapu-Rapu Controversy: Rumor-Rich and Information-Poor

The recent and highly publicized case of the mine operated by Lafayette Philippines Inc. (LPI) for the extraction of gold, copper, and zinc on the island of Rapu-Rapu in the province of Albay illustrates well how, handled improperly, mining incidents can arouse the passions of local communities and even reach the level of national controversy.

A steeply sloped island in a very rainy zone, with a history of mining dating back to World War II, Rapu-Rapu was the first mine site to go into production after the Supreme Court decision affirming the 1995 Mining Act. Rapu-Rapu was touted as a “test case” and a demonstration of responsible mining by the Department of Environment and Natural Resources. LPI operations were preceded by community consultations, new roads, and a number of social benefits (housing, community centers, relocation compensation). However, rumors also circulated in Albay that cash payments had been made to officials to speed up approval processes for the mine (Authors’ Interviews 2006⁶).

On October 11, 2005 a tailings spill occurred at Rapu-Rapu when a pump failed and an emergency pond overflowed into nearby creeks leading to the ocean. LPI temporarily shut down, and the community of Binosawan reported coastal fish kills. Initial testing by the Mines and Geosciences Bureau (MGB) at the mouth of the creeks showed free cyanide levels thousands of times above the DENR standard of 0.05 mg/liter. However, two days later, another test by MGB showed the free cyanide returning to levels below or near the DENR standard.

As a result of this incident, the Regional DENR office issued a Notice of Violation to LPI, but a week later a provincial agricultural official also requested the Bureau of Fisheries and Aquatic Resources (BFAR) to investigate the mining spill.

On October 31, 2005, a second tailings spill occurred when heavy rains cause LPI to release runoff from their settling ponds. A larger fish kill was observed by people of Binosawan and Malobago, and LPI sent a letter of notification to the DENR regional office providing notification of the second spill. The DENR regional office subsequently fined LPI for violating the conditions of its Environmental Compliance Certificate.

On November 4, personnel from BFAR, accompanied by local officials, tested water and fish samples in the area. However, the BFAR officials had no established methodology for the testing and relied on locals for advice on where to take samples. Further confusing things, the BFAR officials tested for mercury, which is not used by LPI. A week later, BFAR reported that water and fish samples from the coastal bay of Albay and the bordering province of Sorsogon were found to have mercury levels above the standard limit. This announcement became the headline of many news stories and was widely broadcast by both local and national media.

In response, Mayor Benito Doma of Prieto Diaz, Sorsogon requested BFAR to test fish samples in his area and surrounding areas for mercury, and Governor Raul Lee of Sorsogon created a Multipartite Monitoring Task Force to investigate the presence of mercury and cyanide in the coastal waters of Sorsogon. On December 6, BFAR analysis of fish samples from Prieto Diaz showed mercury levels above the standard limit and unfit for human consumption, and the following day BFAR found that fish in the area tested positive for the presence of cyanide. With these announcements, which also received extensive media attention, a fish scare began. Residents stopped buying marine products caught by local fisherman, who saw their sales plummet. In mid-December, new BFAR water and fish samples were found to be within the standard limit for mercury, but several fish samples from area communities tested positive for cyanide.

Given the fisheries crisis and the lack of clear information, local officials appealed for additional help. Four mayors from Sorsogon asked for a Congressional investigation of LPI. Mayor Doma of Prieto Diaz wrote a letter to Catholic Bishop Arturo Bastes asking the “intervention and support of the diocese of Sorsogon.” Governor Lee of Sorsogon wrote to the Natural Sciences Research Institute at the University of the Philippines requesting an independent fish and water sampling. Meanwhile, with public pressure mounting, DENR Secretary Michael Defensor signed a Cease and Desist Order against LPI and levied a fine of approximately US\$200,000.

As public anxieties increased, local officials, fisherfolk, NGOs, and church workers staged a “fluvial rally” at the water’s edge of the mine site to dramatize their opposition to LPI. Throughout the previous two and one half months, Lafayette Philippines Inc. had not managed the situation well. The company did not deal with the public and local communities in an open and transparent manner. Rather, LPI officials stressed the small scale of the tailings spills, made relatively few public comments, and limited the access of public officials and citizens to its mining site (Authors’ Interviews 2006⁷).

On January 18, 2006, however, LPI announced that the firm’s management was being taken over by Carlos “Sonny” Dominguez, a well-connected businessman and former secretary of agriculture. Dominguez stated that LPI would now provide more information to the public, allow greater access, and ensure environmental protection.

The Catholic Bishops Conference of the Philippines (CBCP) was not assuaged. On January 29, 2006, the CBCP issued a pastoral letter calling for a ban on new foreign investments in mining and the repeal of the 1995 Mining Act. In response, the Arroyo administration announced the cessation of mining permits, but then reversed its position the following day after this created an uproar in the mining sector and broader business community.

With the Rapu-Rapu controversy having reached the national level, President Arroyo traveled to Albay to meet with local government officials and groups from civil society to discuss the situation. These discussions made clear to the president that the public was confused and concerned by conflicting information with respect to the presence of mercury or cyanide in the bay and that there was little confidence in the statements of either Lafayette or DENR.

Accordingly, President Arroyo announced an independent study to be conducted by the University of the Philippines regarding the environmental and health issues and the formation of an independent commission headed by Bishop Bastes to assess the overall situation with respect to the resumption of LPI’s mining operations at Rapu-Rapu.

The results of the University of the Philippines study dispelled fears concerning any remaining presence of mercury and cyanide in the fish and waters off Rapu-Rapu Island. However, the report of the Rapu-Rapu commission headed by Bishop Bastes, a well-known anti-mining advocate, was highly negative in regard to Lafayette's entire mining operation. The commission found that the Rapu-Rapu mine should remain closed and the government should withdraw the company's Environmental Compliance Certificate. Bastes asserted that Lafayette had begun operations before the completion of its environmental protection infrastructure and had downplayed the effects of its tailings spills. Moreover, Bastes said that DENR had been negligent in failing to properly monitor Lafayette's operations. In response, the company's spokesman said that the findings of Bishop Bastes's commission were "unscientific" and reflected "an unforgiving bias against mining" (Associated Press 2006).

By the spring of 2006, the Rapu-Rapu controversy had reopened debate over the adequacy of the Mining Act of 1995. The Speaker of Congress, Jose de Venecia, promised the CBCP that Congress would review the law to see if changes in the law were necessary. Meanwhile, officials of the Arroyo administration made statements affirming the government's commitment to the maintenance of a stable and open regulatory environment for foreign investors. On June 13, 2006, LPI was given permission by the government to reopen a 30-day test run (Rivera et al. 2006). Lafayette also made modifications to their operating systems to improve safety and answer specific issues and concerns raised by DENR. Despite continued debate over Lafayette's operations, and after further test runs and inspections by DENR, LPI was allowed to resume operations.

TVI: Trying to Develop Responsible Mining in a Conflictive Environment

The processing and mining operations of TVI Resource Development Inc. (TVI) at Canatuan in Zamboanga del Norte have been troubled since they began in the mid-1990s. In retrospect, this is hardly surprising, as TVI chose to mine a site in a region of the Philippines that was characterized by competition over the control of small-scale gold mining activities, infighting among the local indigenous people, and guerilla operations of the New People's Army (NPA) and the Moro Islamic Liberation Front (MILF).⁸

There was a gold rush in the area of Canatuan in the late 1980s and early 1990s. Panners came from throughout Mindanao and elsewhere to set up small-scale mining activities. At first, gold was extracted using small rod mills for grinding the rocks and mercury and cyanide for capturing the gold. Later, cyanide extraction plants were used for the same purpose. In each case, these toxic chemicals were allowed to flow into makeshift tailings dams from which they often leaked into surrounding creeks and waterways.

The people living in the area were an indigenous group, the Subanen, who for the most part worked as laborers for the small-scale miners. However, the rod mills were also owned by a small group of Subanen, who thereby exerted a significant measure of control over the small-scale mining taking place. In 1992, the Siocon Subanen Association Inc. (SSAI) was created to organize the interests of the Subanen people. (Siocon is the name of the nearest sizable town) Two of the leaders, Timuay Jose Anoy and Onsino Mato, were among those with strong influence over small-scale mining activities, and the SSAI stated its opposition to the introduction of large-scale mining. Some within the SSAI dissented from this position and believed that that small-scale mining benefited only a few within the Subanen community.

When the Indigenous Peoples Rights Act was passed in 1994, SSAI applied for a Certificate of Ancestral Domain Claim (CADC) for Canatuan, but a group led by Marciano Sapián and others called into question the representativeness of the claim, as some Subanen leaders had not been

included as signatories to it. Sopian's group filed a separate CADC. In 1997, DENR issued the CADC to the Subanen, covering over six million hectares. Anoy and Mato asserted that the CADC had been issued to them personally. However, in the next phase of the process, DENR issued the Certificate of Ancestral Domain Title (CADT) to the "Subanen of Zamboanga del Norte."

It was while these tensions were mounting that TVI moved into the area. In 1996, TVI received a Mineral Production Sharing Agreement from the Philippine government allowing exploration within Canatuan. A year later, TVI received its Environmental Compliance Certificate for the mining project. As the prospect of large-scale mining operations clearly threatened those benefiting from small-scale mining, SSAI and a number of NGOs mobilized demonstrations against TVI's entry.

In 2001, a new election was held for the leadership of SSAI. Anoy and Mato were ousted and replaced by Juanito Tumangkis, who issued a "manifesto of disgust" over the prior leadership. However, Anoy and Mato continued to claim they were the leaders of SSAI.

Although TVI claimed that its rights to mine in the area predated SSAI's CADC, the company entered into a Memorandum of Understanding (MOU) with the new Subanen leadership. The MOU provided a royalty to the Subanen in the amount of 1 percent of mining revenues and committed the company to provide community support in the form of housing, education, and health care.

TVI did not begin mining operations immediately. Instead, the company reached an agreement with DENR to process existing mining tailings and to clean up many of the contaminated sites left by small-scale mining operations.

Protests and conflict between the Subanen groups and between TVI and those in the Subanen community committed to small-scale mining continued. In December 2002, Marciano Sopian, several family members, and a number of TVI employees were killed on the road to the mining area by members of an MILF "lost command" that many believed had links to opponents of the new SSAI leadership. In response, TVI strengthened its security arrangements.

Security had been a serious concern for TVI from the outset, given the presence of the NPA and MILF. TVI made use of Philippine legal provisions allowing for the formation of Special Citizen Active Auxiliary units (SCAA) under the supervision of the Armed Forces of the Philippines (AFP). SCAA units at TVI are predominantly staffed by Subanens, although few of them are from the immediate area. A number of tense, conflictive, but generally not violent situations have arisen at checkpoints between SCAA units and local residents, and TVI admits that some of these incidents have not been handled well. It is also worrisome and problematic that, despite the AFP's ostensible supervision of the SCAA units, it is really TVI that fulfills that responsibility.

During the past two years, TVI has begun its active gold and silver mining operations. Our field research shows that TVI is making serious efforts to ensure environmental protection and provide meaningful community benefits. Testing of the nearby creeks and streams for toxic wastes or by-products is continuous and rigorous. The company has spent over US\$1 million to construct a state-of-the-art tailings dam. TVI has constructed many new housing units, and clearly improved educational opportunities and health care services in Canatuan. In interviews, several Subanen elders stated that a clear majority of the Subanen are supportive of TVI's presence in Cantuan. At the end of 2005, TVI brought in new staff to work in community development. These are professionals with long experience in the field, who have worked for many years with well-

known activist organizations committed to improving the lives of the poor in the Philippines. By all these standards, TVI has an observable commitment to responsible mining.⁹

However, the experience of TVI raises serious questions about where and when companies locate their operations. Conflict over land rights in Canatuan have been resolved officially, but still continue to produce lingering resentments. Some small-scale miners have come to work for TVI, some have left the area, but others have yet to adapt to TVI's presence. Many observers see TVI as having played one side against the other in its handling of relations with the Subanen. The continued use of the SCAA units has the potential to lead to an explosive situation. Community relations are improving but have a long way to go.

The case of TVI is a reminder that there is no simple formula for responsible mining. It is contingent on the specific circumstances of the geographical, historical, cultural, social, and political context where mining operations are to take place.

Coral Bay: A Commitment to Community Development

The operations of Coral Bay Nickel Corporation (CBNC) are neither as troubled nor as complicated as those of Lafayette in Rapu-Rapu or TVI in Canatuan. CBNC, which officially began operations in April 2005, is not engaged in active mining operations but is actually a hydrometallurgical processing plant.¹⁰ It is co-located with Rio Tuba Nickel Mining Corporation (RTNMC), and CBNC processes RTNMC's stockpiles of nickel and cobalt ore.

Nickel mines do not present the same kinds of pollution concerns as gold or copper mines. Typically, there is no lead, arsenic, mercury, or cyanide that is used or produced. Nevertheless, CBNC, with Sumitomo Metal Mining Company as the majority owner, has allocated huge sums (US\$180 million) to environmental protection and pollution control facilities.

Rio Tuba's nickel mine operations did come under criticism in years past. Problems with the siltation of tailings dams and community concerns over pollution were part of the historical backdrop in the area. Before CBNC went into operation, concerns were also raised about the possible displacement of indigenous families and the possibility of deleterious effects on mangroves and the nearby coral reef.

CBNC dealt with these fears directly by launching extensive environmental and social programs. Technologically sophisticated siltation dams and tailings dams were constructed, along with a waste-water treatment plant and air pollution control facilities. CBNC put a far-reaching water monitoring program and real-time detection system into place. An abandonment plan was instituted to assure that during the ten years after the cessation of operations all affected lands will be rehabilitated and reforested.

Perhaps even more impressive has been CBNC's commitment to community development. Since 2004, CBNC funds have been used to build day-care centers and schools, provide school support and scholarships, construct new roads, deliver free medical services to 11 villages, distribute farm implements such as threshers and tractors to indigenous farmers and fishing boats to fisherfolk, initiate animal husbandry programs, and even open a marine sanctuary.

All told, CBNC's spending on social development programs is more than 10 times the amount required by law. These efforts have been recognized by numerous awards recognizing CBNC's example of corporate social responsibility. More importantly, CBNC has made an observable positive impact on the lives of the people in the region. CBNC stands as a model mining operator with regard to social and environmental issues and demonstrates that responsible mining that

produces a win-win outcome for both the company and the surrounding communities is indeed possible when grounded in a real financial and corporate commitment.

Some Lessons Learned

The Republic of the Philippines is richly endowed with mineral deposits that—if responsibly mined and managed—have the potential to contribute significantly to national development and the social and economic well-being of the population. The Philippines also has remarkably comprehensive national legislation and regulatory provisions that address indigenous rights, environmental concerns, and social benefits related to mining.

However, our research and interviews show that, with only a few exceptions, “responsible mining” is yet to be made a reality in the Philippines. Similarly, interviews with dozens of government officials, civil society representatives, and businesspeople from across the country indicate that the implementation and enforcement of Philippine mining laws, amendments, and administrative orders are erratic and weak. Moreover, in the near term, large increases in additional resources for implementation and enforcement of mining laws and provisions are not likely to be forthcoming.

In these circumstances, we conclude that in the Philippines and other similar developing countries, the development potential of the mining sector is likely to be realized only through the creation of sufficient trust funds to ensure environmental safeguards and community benefits.

To date, the conduct of most mining companies operating in the Philippines has not produced sufficient safeguards and benefits. The enforcement capacity and will of the Philippines government have been too inconsistent to ensure them. And the provisions of the Mining Act of 1995 are too weakly implemented to guarantee their realization.

Neither mining, nor the foreign investment it generates, is an end in itself. Mining is not an economic “silver bullet” but a potentially promising economic sector that should be viewed in the context of the broader development goals of local communities, provinces, and the nation. Responsible mining requires taking into account not only economic and social effects on the host communities during the life of the mining operation but also the long-term impact of mining activities on those communities in the years after mine closure.

Yet at the same time, while calls for a total ban on mining reflect real environmental and social concerns, they are, in our opinion, unjustified. Examples of environmentally sound and socially beneficial mining operations *do* exist, but they generally involve operations where companies voluntarily go far beyond the provisions of the Philippines Mining Act of 1995. This is costly but essential to their sustainability.

In both the Philippines and many other developing countries, the public debate over mining rests upon a *weak knowledge base*, and the statements of government and mining companies have little credibility with affected communities. Communities often know little about the actual mining process and are poorly prepared to judge the nature and seriousness of accidents, real or alleged. Both government and mining companies do a poor job of communicating and sharing information with the public-at-large. Indeed, the lack of transparency on the part of many mining companies is counterproductive and a threat to the viability of the industry. However, it is also true that anti-mining advocates often make exaggerated claims or inaccurate statements that detract from rather than enhance the quality of public debate.

Perhaps worst of all, data is often incomplete or not authoritatively verified by credible, independent sources, although such expertise is available. As demonstrated by the Rapu-Rapu tailings spill and controversy, if public trust and confidence in the mining sector are not established, efforts to revitalize the sector are likely to fail. Public attitudes about mining can only be changed by *real examples* of responsible mining practices that bring tangible benefits to communities. Mere slogans about “responsible mining” will *not* build public confidence.

If communities do not receive tangible socioeconomic benefits from mining and are not protected from environmental threats, protests will increase in number and mining operations will become unsustainable.

Mining firms with good reputations to keep and healthy financial resources are *more likely* (although not certain) to engage in socially responsible mining. Such firms are typically international or they are domestic firms with ties to reputable international firms. In the short run, socially responsible mining costs more and requires considerable financial resources—but this is the sine qua non of long-term viability.

Based on the evidence in the Philippines, calls for excluding foreign investment are short-sighted and run contrary to the actual performance of companies in the Philippines. Yet, additional actions on the part of both government and the private sector are needed if the mining sector is to be both productive and sustainable. If “responsible mining” is not implemented as a reality, rather than as a strategy to promote investment, the net result will be a *loss* in investment and negative spillover effects to other sectors.

Recommendations

Based on our study of mining in the Philippines, we recommend serious consideration of the following issues and possible actions:

- Increasing funds for social development. Our research shows that those firms attempting to practice socially responsible mining in the Philippines are currently spending a minimum of 4 percent to 6 percent of mining and milling costs or above.
- Strengthening environmental management processes with respect to such issues as mining tailings, waste rocks, and acid rock drainage. This strengthened effort may need to be funded by a direct levy on mining companies.
- Increasing the premiums and contributions required of mining companies for environmental safeguards. For example, this could include an Environmental Performance Bond; Environmental Pollution, Impairment, and Clean-up Liability Insurance; and Final Mine Rehabilitation and/or Decommissioning. Ideally, these premiums should be determined by past company performance as evaluated by an independent rating system.
- Encouraging—and eventually requiring—mining companies that wish to operate in the Philippines to adopt international codes of conduct and join international organizations that promote environmentally and socially responsible mining. Examples include:
 - International Standards Organization 14001 (ISO 14001).
 - International Cyanide Management Code (ICMC).
 - Best Practice Environmental Management in Mining (BPEMM).

- Requiring mining companies to provide an analysis of the projected social impact of their mining operations and contributions to community development. This analysis should include such areas as employment, income, health, and education.
- Requiring mining companies to begin community development efforts in the exploration phase. Just as finding the ore body is a necessary technical prerequisite to ensure commercial viability, creating trust and developing positive community relations is a necessary social investment to ensure successful mine operations.
- Making it official national policy to join and become an active member of the Extractive Industries Transparency Initiative (EITI).

We are cognizant of the fact that several of these recommended changes will increase the financial threshold for the entry of mining companies. Some may view this as a barrier to foreign investment. However, it is only a barrier to *irresponsible mining*, which is the real threat to the viability of the sector and increased foreign investment. It is only by achieving *real, responsible mining* through strengthened environmental protection and tangible benefits to local populations that mining will be able to realize its potential as a sustainable pillar of national economies in Asia, Africa, and Latin America.

There remains a need to create positive demonstration effects to promote sustainable mining through tangible examples of successful, modestly sized operations that practice responsible mining. Rushing to expand the mining sector may increase the likelihood of further accidents that are almost certain to undermine the sector's growth potential. A strategy of mining expansion focused more on the quality than the quantity of mining operations will pay higher dividends over the medium to long term.

As part of that effort, there is a strong need to build the capacity of villages, municipalities, and provinces to make informed decisions about all aspects of mining, from exploration and feasibility studies to actual operations and mine closure issues. It is similarly important to ensure, wherever possible, the timely availability of reliable, independent information on the environmental effects of all aspects of mining through the establishment of cooperative agreements with universities and research centers, both domestic and foreign.

The costs of environmental irresponsibility and bad social practices on the part of one mining company are borne by all companies in the region, and peer pressure should reduce the likelihood of major accidents and improve the credibility of the industry. Therefore, the private sector in developing countries should seek to institute mechanisms for collective self-evaluation and self-policing with regard to member companies' environmental performance and contributions to community development.

And lastly, for the foreseeable future, there will be a need to provide increased support for the enforcement of all mining laws and provisions by the appropriate government agencies and local communities. It should be recognized that effective enforcement and manageable levels of investment are related. When enforcement is weak, prudence requires that the vetting of prospective investors be more stringent. However, strong enforcement allows greater latitude in opening the mining sector to investors.

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Endnotes

¹ These included the closure of Atlas mine in 1994 due to financial difficulties, Marcopper mine in 1996 due to a disastrous tailings spill accident, Dizon mine in 1998 after a pit slide caused by a typhoon, Maricalum mine in 2001 as a result of both operational and financial problems, and the shift by Manila Mining and Lepanto Mining from copper to gold (Cabalda et al. 2002).

² The material presented here is derived from extensive ESAF interviews that FESS and the Croft Institute conducted in the Philippines in 2006.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ The material presented here on TVI is derived from extensive on-site and community interviews in February 2006.

⁹ At the same time, other groups that have visited the TVI area (although not the mine) have come to different conclusions. For example, a team led by Claire Short, MP and former UK Secretary of State for Development, credited claims by dissident Subanen leaders that TVI has polluted waterways, evicted families, and used violence and intimidation by the SCAA to block the free movement of indigenous people and their transportation of food and equipment (Doyle et al. 2007). However, interviews with Subanen elders, the TVI manager for environmental protection, and the newly arrived community development staff at TVI led us to be skeptical about the accuracy of a number of these claims, especially in relation to alleged environmental damages.

¹⁰ The material presented here on Coral Bay Nickel Corporation is derived from extensive on-site and community interviews in February 2006.

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