

Wealth and Sustainability: The Environmental and Social Dimensions of the Mining Sector in Peru

**Peru Country Management Unit
Environmentally and Socially Sustainable Development
Latin America and the Caribbean Region**

EXECUTIVE SUMMARY

Peru is the world's second largest producer of silver, third largest producer of zinc, fourth largest producer of lead, fifth largest copper producer, and the sixth largest producer of gold. Richly endowed with other natural resources as well (including natural gas, fisheries and timber), Peru is nevertheless, a poor country. The mining sector is thus characterized by mistrust among its key stakeholders, and is prone to social conflicts.

The mining industry, in that context, both raises and dashes hopes. Macroeconomically, it is extremely important, accounting for 57 percent of all Peru's exports and 6.6 percent of Gross Domestic Product in 2003.¹ Since 1992, it has attracted over US\$10 billion in domestic and international investment. Between 2001 and 2003, mining accounted for 37 percent of total foreign investment in Peru. It contributed 4.5 percent of government tax revenues in 2003, and, despite being a capital-intensive industry, employs over 70,000 people directly and 350,000 people indirectly, many of them in Peru's poorest rural areas. Above all, fueled by privatization and other reforms since the early 1990s, it is a fast-growing sector. Over the past ten years, while GDP growth has averaged 4 percent a year, that of the mining sector has averaged 10 percent. A series of major new projects are expected to power further growth, averaging 6.6 percent in 2005-2007.

The expectations fired by these developments are dashed by environmental damage, on the one hand, and by limitations in the use and distribution of the proceeds of mining, on the other. Both are exacerbating social conflicts, to a point that could deter investors or delay new projects.

It is against that backdrop that this report analyzes the current major environmental and social issues associated with the mining sector. It does not deal with geological prospects, investor concerns, or with wider philosophical issues of social justice; preferring to examine the technical aspects of environmental impacts and the rational use of mining proceeds. In so doing, it looks at the existing policy and institutional frameworks as they contribute to current constraints, and at strategic options for better management of key environmental and social challenges based on international experience and best practices.

The purpose of this report is to provide the Government of Peru (GOP) with technical analysis and a framework for making choices that could help improve its capacity to address the environmental and social impacts of mining operations. The study is based on a review of the literature, field studies and consultations with key stakeholders aimed at determining the key environmental and social issues facing the mining sector. Their perceptions helped define the scope and structure of this report and resulted in its focusing, with the GOP's agreement, on four interrelated priority areas: the ongoing

¹ Sociedad Nacional de Minería Petróleo y Energía (SNMPE). *Reporte estadístico minero energético. Segundo Trimestre 2004*. [Ministry of Energy and Mines Statistics Report. Second quarter 2004]. Further footnotes substantiating statements made in this Executive Summary are to be found in the body of the text.

damaging impacts of past mining and smelting operations, known as mining environmental legacies or MELs (Chapter 2); the environmental governance framework (Chapter 3); the capacity and framework to address social issues triggered by mining operations (Chapter 4); and transparency and rationality in the allocation of resources generated by mining (Chapter 5).

Preliminary consultations with the private sector (National Society of Mining, Petroleum and Energy, SNMPE), public sector, civil society representatives and international experts from a wide range of agencies (World Bank, IFC, MIGA, CAF, and the IDB) corroborate that the above-mentioned issues were the areas where this study could make the greatest contribution to elucidating the social and environmental concerns faced by the mining sector in Peru and that the focus should be on large and medium-scale mining operations (mainly because smaller and artisan mining operations are the subject of other studies and projects).

The Peruvian government has taken concrete steps to address some of these issues, including: (i) establishing an institutional framework to harmonize environmental legislation and institutional responsibilities; (ii) developing a body of sector-based environmental legislation, including a set of command and control instruments for mining activities such as environmental impact assessments and environmental adaptation and management plans (PAMA); (iii) setting ambient standards for water, air and solid waste; (iv) compiling an inventory of mining environmental legacies; (v) creating a framework for engaging in dialogue with affected communities; (vi) promoting transparency regarding the distribution of mining proceeds to the regions and local governments; (vii) forming sector-based environmental management units; and (viii) instituting reforms to create a more attractive investment climate. Progress is also discernible in the private sector, as demonstrated by the number of approved PAMA to bring them into compliance with legislation.

Despite this notable progress, only implemented since 1993, the GOP continues to face a number of challenges: (a) addressing past environmental legacies from mining operations; (ii) monitoring, regulating and penalizing mining activities polluting in excess of permissible levels; (iii) guaranteeing that new mining operations will adhere to environmental and socially accepted international standards throughout their lifecycle; (iv) addressing social issues, including a growing lack of trust by communities toward mining operations; (v) promoting transparency at a local level regarding the management and use of mining proceeds; and (vi) financing activities that would address priority environmental and social issues related to mining.

These limitations are compounded by: (i) lack of public awareness and understanding of environmental issues associated with mining operations; (ii) lack of baseline data for measuring environmental quality and risks from environmental legacies; (iii) the widely held view that environmental quality and economic growth objectives are incompatible; (iv) a weak institutional framework, including the absence of an independent central environmental authority with enforcement capability; and (v) limited financial and human

resource capacity in the sectoral environmental unit within the Ministry of Energy and Mines (MEM) to efficiently carry out its responsibilities.

By addressing the above-mentioned issues, this report seeks to ensure that Peru's rapidly expanding mining sector contributes to sustainable development. It is, furthermore, consistent with the World Bank's Country Assistance Strategy Progress Report for Peru (CAS, August 2004) since it provides the government with strategic options to address social and environmental issues associated with the mining sector and thus promote reforms and competitiveness, and reduce investor risk. The timing of this work is appropriate since: (i) it responds to a request made by GOP at a time when it has the willingness and commitment to improve and reform environmental and social policies in the mining sector and to address conflicts; (ii) it is the first in-depth study in a mining country following the Extractive Industries Review, which concludes that the World Bank Group needs to stay engaged in mining countries like Peru and help address environmental and social issues; and (iii) the policy options set forth in this study can already be tested and applied to new mining activities such as Las Bambas, so that potential conflicts are identified and addressed early on.

Main Conclusions

Environmental Legacies.

The ongoing damaging impacts of past mining and smelting operations (mining environmental legacies, MELs), scattered over vast tracts of the Peruvian territory, pose a serious health problem and are a major social irritant in local communities. Poor tailings containment and inadequate methods of disposing of the large volumes of hazardous materials and pollutants involved in mining operations have already led to widespread seepage, acid drainage, and water pollution, as well as other negative impacts on biodiversity and ecosystems. For example, some of the mining and metallurgical activities along the Rimac River pose the risk, along with other sources, including agriculture, of polluting the drinking water sources that supply the Lima metropolitan region, inhabited by over seven million people or approximately one third of the Peruvian population. Other river basins hit by mining-induced pollution include the Mantaro, Pisco, Madre de Dios, Llaucano and Santa. Already grave, the dangers of contamination are compounded by the fact that Peru is prone to seismic tremors and earthquakes.

The economic impacts through, for instance, the loss or damage of productive land and the loss or degradation of water resources, have also made the public increasingly aware of the adverse effects of past and present mining and smelting operations, exacerbating community opposition to current and new projects and creating potential sources of conflict.

The government's efforts to address the MELs got underway in the mid-1990s. Since, the main issues to be addressed include: (i) locating and classifying unattended mining

legacies (whether orphan sites or those with an identifiable concessionaire); (ii) determining how to make them safe (remediation); (iii) identifying who is/was responsible for remediation (including the Government); and (iv) assessing how to finance the remediation. In tackling those technical, legal, and financial issues, the government was at the same time laying the foundations for a comprehensive framework of laws, regulations, and incentives to govern the numerous, and in some cases major, new mining projects in Peru.

From 2001 to June 2003, the *Environmental Legacies Elimination Project (Proyecto de Eliminación de Pasivos Ambientales-EPA)* sought to: (i) produce a diagnostic assessment of the environmental impacts of each mining legacy; (ii) draw up a detailed national inventory, identifying each legacy with its geographic location, key environmental risks, legal status, and physical characteristics; (iii) identify and develop technologies for environmental rehabilitation; (iv) carry out studies and works to remediate and rehabilitate the areas affected by environmental legacies; (v) take preventive measures to avoid the generation of acid drainage from mining operations, clearing and leveling of abandoned tailings; (vi) reduce the risk of cracks or leaks in abandoned tailings; and (vii) reduce, neutralize and/or eliminate the negative effects of environmental legacies on public health, flora and fauna, and economic activities in the surrounding areas, by, among other things, restoring and enhancing water, land and air quality through a series of actions, including reforestation.

This project helped produce a preliminary inventory of 610 MELS, 72 percent of which were found to be legitimate mining concessions with identifiable owners/operators. The EPA also came up with a rough-and-ready cost estimate for the rehabilitation of environmental legacies in Peru of US\$200-250 million which remains questionable, not counting the (considerable) MELS in state-owned enterprises, such as Centromin.

Parallel to the government's efforts, both the mining industry and NGOs are becoming more sensitive to environmental issues. While the National Society for Mining, Oil, and Energy has produced a voluntary code of environmental ethics and entered into environmental conservation and social development contracts with regional governments, a non-profit group called *Avancemos Juntos*, composed of prominent mining businessmen, ex-government officials, and civil society and NGO representatives, was formed in May 2004 to offset some of the technical capacity limitations in the Ministry of Energy and Mines (MEM) and some mining companies to address MELS. It could eventually evolve into a center of technical expertise for addressing environmental legacies. Bilateral cooperation projects such as the Peruvian-German Mining and Environment Project, part-sponsored by Germany's Federal Institute for Geosciences and Natural Resources-BGR, could be also a promising source of professionals qualified in environmental management.

However, it is in the legal sphere that most progress has been achieved in the past two years, with the law governing mine closure (*Ley 28090*) and the Law for Environmental Legacies of Mining Activities (*Ley 28271*). The objectives pursued by the latter are comprehensive and seek to regulate: (i) the identification process for environmental legacies stemming from mining activities; (ii) responsibility for the remediation and

rehabilitation of areas affected by environmental legacies; (iii) establishment of a financing mechanism; and (iv) mitigation of the negative impacts of MELs on the population's health, the surrounding ecosystem, and properties. Despite its clear intent, however, the law leaves a number of potential loopholes that might allow mining companies to evade their responsibility for the remediation of MELs by transferring the liability to the state. The law appears not to be coordinated with the targets and timetables of the Mining Reference Plan for 2000-2009. Some definitions in the law – what constitutes an “abandoned” or “inactive” site, for instance, -- need to be tightened to preclude misinterpretation and evasion.

Under the MEL law, concession holders responsible for environmental legacies will sign contracts for rehabilitation and remediation with the MEM through the General Directorate of Environmental Affairs (*Dirección General de Asuntos Ambientales-DGAA*). Those found responsible for environmental legacies will have to prepare studies and carry out works to control, mitigate and eliminate, in whatever way is possible, the risks and negative effects of the legacy, according to their remediation contract. The studies would be based on the maximum permissible levels (MPLs) as benchmarks, and enterprises would have to present their plan within no more than one year (to be completed in no more than 3 years), according to the Guidelines approved by the DGAA.

However, one of the flaws in the law is that it opens up the opportunity for mining companies to unilaterally rescind their concessions and waive the mining right, shifting all the daunting burden and obligation of remediation and rehabilitation to the government. Consequently, the law would be undermining the “the polluter pays” principle. This runs counter to current environmental legislation and the licensing process for mining operations, which oblige all holders of valid mining titles and concessions to comply with environmental standards and rules for mines. Hence, the MEM is currently in the process of submitting an amendment to the law which will limit potential loopholes. One of the weaknesses in enforcing any law, however, is that the government has not assumed its own responsibility for addressing multiple MELs produced by state-owned mining companies. No thorough study has even been done of these state-owned MELs.

As for financing remediation, Article 9 of the MELs Law assigns the mandate for fundraising and financing for the remediation and rehabilitation of legacies to the National Environmental Fund (*Fondo Nacional del Ambiente- FONAM*). According to the Law, resources for financing the remediation and rehabilitation of environmental legacies should come from international financial cooperation arrangements, debt swaps, and other sources, provided that public funds are not used and the national budget is not affected (in spite of a recent contribution of US\$ one million by the MEM, and verbal commitment by three mining companies to contribute to FONAM's endowment fund). There are two issues to be resolved in this approach: (i) FONAM has no technical or fund-raising experience in this field and would need to team up with partners of proven technical excellence and receive training; and (ii) there is no broad base of international financial mechanisms available for a systematic rehabilitation program, as mining environmental legacies are ranked low in worldwide public awareness (compared with biodiversity and air pollution concerns, for instance). In addition, the idea that foreign

donors ought to come to the rescue with donations and contributions to solve the orphan legacies problem while the state is refusing any significant corresponding financial commitment from one of the economically strongest sectors, would be very hard to sell. The state needs to demonstrate that MELs represent a priority and that resources will be destined to address this critical issue.

One policy option under consideration is that operators put up a financial surety as part of a Mine Closure Plan to be incorporated in the initial Environmental Impact Assessment needed for the operating license. However, the Mine Closure Plan Regulation was still under evaluation by MEM as this report went to press.

Chapter 2 also examines lessons learnt in other countries, such as reunified Germany, and best practices in Bolivian mine closure legislation, US Bureau of Land Management Strategies, and the World Bank's Safeguards Policies as instruments to avoid environmental legacies. It concludes that the remediation and rehabilitation process can help create jobs in areas where mining activities have stopped, and can also help develop a profitable industry specializing in remediation efforts. Therefore, local, regional, and national levels of government (including numerous agencies, such as DIGESA, CONAM, INRENA, MEF) should be involved and committed in order to successfully undertake the task of rehabilitating MELs.

Once the remediation and rehabilitation of MELs have been established as a national priority and resources allocated to them, key elements in a strategy for addressing MELs should include: (i) enhancing and updating the current inventory by identifying and prioritizing the most critical MELs (based on health risk criteria), and determining the health, environmental and social costs, as well as the associated remediation costs, and each MEL's legal status; (ii) developing a monitoring program to determine if there are chemical leaks; (iii) establishing center(s) of excellence for guaranteeing technical guidance and capacity building; (iv) engaging the state in the remediation of MELs from state-owned mining operations (setting an example of commitment to MEL remediation); (v) conducting an awareness campaign (within government, regions and municipalities) on the risks of MELs; (vi) creating a MEL rehabilitation fund; and (vii) enhancing the capacity of FONAM to manage the fund for MEL remediation.

Environmental Governance

While Chapter 2 focused on MELs and the legal and regulatory arrangements needed for remediation, Chapter 3 looks at the broader environmental and social policies and capacities needed to ensure that mining activities are carried out in an environmentally sound and socially responsible manner. That whole framework is referred to in this report as "environmental governance." Within it, the licensing process plays a key role in ensuring that new mining operations will abide by environmental standards, coupled with legal mechanisms (such as audits and Environmental Management and Adaptation Plans or PAMA, introduced in 1993) that enable the MEM to monitor mining activities and penalize companies that do not meet those standards.

These developments are major improvements compared to the times prior to the policy and institutional reforms of the 1990's, when most of the mining companies in Peru operated under the assumption that their contribution to the country and society would be limited to: (i) the development of the local economy through job creation, construction of basic infrastructure, enhancement of local markets (particularly in poor and remote areas); and (ii) fiscal contributions through taxation and payments for concessions. Very few companies addressed environmental issues (and those that did, managed to do so in a very limited manner) during and before the eighties. The regulatory framework prior to the 1990's did not include any mechanisms that would require companies to comply with environmental or social standards or with the remediation/compensation of environmental degradation. Even foreign mining companies known to be rigorous in ensuring an adequate environmental and social performance in their countries of origin often failed to be proactive in taking specific measures that could ensure improved environmental compliance.

During the 1990s, the World Bank assisted the Government of Peru in its efforts to: (a) establish enabling conditions to attract mineral investments; (b) reform the role of the government from that of owner to regulator; and (c) shift the responsibilities for operational activities to the private sector through the implementation of first generation reforms of the mining sector carried out under the Bank-financed Energy and Mining Technical Assistance Project (EMTAL). This project, initiated in 1993, is credited with catalyzing many key regulatory and institutional changes that promoted sustainable practices in the mining sector. Its objectives included: formulation, communication and enforcement of environmental policy and regulations for mining, hydrocarbon and energy related activities; strengthening of the General Directorate of Environmental Affairs (DGAA); and carrying out sector studies, environmental evaluations and the development of an information system for mining.

The implementation of EMTAL reflected the Peruvian Government's need and determination to address the sector crisis faced at that time (which included the paralysis of mining activities in rural areas due to terrorism, the collapse of the state-owned mining operations, and the decline of investment in public enterprises due their costly and inefficient operational structure). EMTAL also helped shift sector policy toward a strategic vision for the mining sector. The changes produced by the new regulations fostering private investment paved the way for today's large- scale mining projects.

That said, and despite both the improvement in the MEM's environmental management capacity and a plethora of institutions created over the past dozen years, such as the National Environmental Council (CONAM), the National Institute for Natural Resources (INRENA), and the General Directorate of Environmental Health (DIGESA) under the ministry of health, this study concludes that the political will to resolve a perceived contradiction between promotion and regulation of the mining industry is still too weak. The MEM still has to establish itself as a credible, efficient and neutral reviewer and approver of environmental impact assessments and licenses.

The current institutional structure for environmental management in Peru could be further improved, for instance, by a strengthened central environmental agency that would share the burden and responsibility of the licensing and enforcement process (and in turn, ensure legitimacy and enhance capacity). This would reduce the possible conflict of interest between an agency which has both the mandate to regulate and promote the activity. In addition, the key instruments for environmental management need to be revised, updated, and the overall institutional capacity for its application enhanced.

The report concludes that the Environmental Impact Assessment (EIA) process, which has a number of limitations, could be strengthened by: (i) requiring that the guide for the elaboration of EIAs (“the guide”) becomes binding by law; (ii) updating the contents of the guide with internationally accepted standards; (iii) preparing detailed terms of reference (currently not required by law) for EIA elaboration on complex projects; (iv) sharing the responsibility of the licensing process with other governmental agencies; (v) establishing a decision-making panel (with key agencies) for the approval of the environmental license to operate (currently depending on one unit within MEM); (vi) integrating the EIA with an social impact assessment; and (vii) modifying the public audience stage of the EIA process, which currently has several shortcomings, and converting it into an impartially moderated hearing with limited and legitimate participants.

In addition, the study concludes that the environmental performance of mining companies which have concluded (or are in their way to fulfilling) their the Environmental Adaptation Management Plans (PAMA) could be enhanced by: (i) updating and enhancing the standards and criteria on emissions; (ii) requiring that mining companies adhere to stricter and internationally recognized standards; and (iii) promoting environmental management systems and environmental certification schemes (i.e. ISO-14000) that would develop voluntary compliance by mining industries. The report also recommends that commercial banks and financial agencies apply environmental and social criteria before granting financial assistance to mining operations. Likewise, the auditing and enforcement system will require enhanced capacity and an internal reorganization, in order to process environmental enforcement more efficiently.

Capacity to Address Social Issues

Chapter 4 is almost equally divided into an analysis of the causes of socially conflictive issues that are currently being played out in at least 16 mining sites in Peru and recommendations for enhancing the capacity and framework for addressing them.

Mistrust among all stakeholders is the common denominator, making dialogue a disproportionately difficult challenge; and it clearly has deep historical roots. In Peru, mining on a larger scale began just after the conquest and once the looting of Inca treasures was exhausted. The search for gold and silver was the obsession of the Spanish conquistadors and the colonial administration had, as its main economic activity, the extraction of these metals. For this purpose, the *mita* or compulsory work in the mines was established for the Andean people, resulting in one of the most exploitative and

inhumane treatments of the indigenous peoples in colonial times. As Andean folklore, mythology, and poetry show, resentment still runs deep.

At the same time, contemporary mining is often developed in extremely poor rural areas, characterized by economic stagnation, lack of employment opportunities, and weak, underdeveloped social capital. Thus, the local communities have interacted with the mines in order to earn cash income, despite their negative perception.

Much of the ongoing ambivalence in local stakeholders' feelings about contemporary mining has to do with lack of knowledge. The mining industry has generally done little to understand the surroundings and social and cultural aspects of the local communities and the government has also done almost nothing to provide the industry with the required information about their way of life. Finally, several communities and a number of social and environmental NGOs have assumed a confrontational attitude toward the industry and the central government.

In this context, where social expectations are usually high regarding large-scale investments and negotiating capacities are rather low, the lack of a more proactive role on the part of the Ministry of Energy and Mines has further increased the communities' perception of not being recognized as social actors.

Apart from the MELs and weak environmental governance analyzed in Chapters 2 and 3, Chapter 4 identifies and discusses the following most common social issues in the formal medium and large-scale mining ventures this report focuses on. Occurring in varying degrees depending, in part, on whether the region concerned is an area of old mining activities, recent mining developments, or a new area without previous mining, these issues are:

- a) Unfulfilled expectations for employment and benefits;
- b) Land acquisition and resettlement impacts;
- c) Lack of adequate communication among companies, communities and the government in the licensing process;
- d) Increase in prostitution and violence;
- e) Weak enforcement of regulations or even absence of the government;
- f) Lack of local capacity for negotiating and management; and
- g) The perception of mining as a polluting activity that particularly affects water resources produces emissions that contaminate the air and adversely affects public health.

The report concludes that all stakeholders' current capacity to address these social issues is very limited. Until recently, community, industry and government did not actively engage in trilateral discussions for addressing some of the common issues. This lack of communication among stakeholders has aggravated or provoked conflicts during the various stages of the mining cycle. In addition, mining operations have often created high prospect of jobs and growth for the regions that in many cases have not materialized. Furthermore, lack of local capacity for negotiation and management has left communities

exposed and vulnerable. Mistrust of the state's capacity to efficiently enforce regulations and penalize industry is a common perceived notion among community members. Land acquisition and resettlement process are also complex and particularly conflictive. Rather than viewing mining as an opportunity for local development, many communities perceive mining as a polluting activity that affects water courses, produces emissions that contaminate the air and has adverse effects on public health without economic benefits for them.

Based on international experience, the report presents options that can be taken by industry, government and communities to prevent potential conflict including: (i) promoting and improving dialogue and an early consultation process among stakeholders (even prior to the exploration phase) (ii) establishing from the outset what mining companies can (and cannot) commit to; (iii) developing a communications strategy to disseminate the benefits from mining operations, including investments made in a specific locality by mining company; (iv) formalizing the process by which operators will enter into agreements for local employment and the benefits the mining company will provide to the local affected stakeholders throughout the various phases of mining process; and (v) developing specific guidelines on land acquisition and resettlement process. In addition: (vi) the MEM should continue to expand its role as a provider of information and prepare guidelines for industry on how to address the most critical social issues, including legal advice on the rights of citizens and communities; and (vii) the GOP should consider the possibility of establishing a sector ombudsman, who would help mediate conflicts if the parties voluntarily accept his or her services.

Building capacity at the local level in order to contribute and participate in the mining project cycle, as well as being able to negotiate and engage in constructive relations with mining companies, is an essential step for community integration with mining development. On a project-by-project basis, the government, in partnership with the respective mining operators, should assess the specific needs for capacity building and then develop a process of supporting training activities for local stakeholders.

This report supports a suggestion that the MEM should consider developing pilot cases to introduce changes in the licensing process with new large projects that are expected to begin investment in the short run. These pilots would provide a space to implement both environmentally and socially best practices, taking into account World Bank social safeguards applicable to the mining sector, in particular Operational Policy (OP) 4.12 on Involuntary Resettlement (revised April 2004) and Operational Directive (OD) 4.20 on Indigenous Peoples (September 1991). In order to create such a space, the MEM should work in partnership with the mining operators and with the participation of interested NGOs. The pilots should apply the best practices found in the mining and hydrocarbon sectors for implementing consultation, managing impacts, acquiring land, establishing agreements, reaching consensus on the types of benefits, and creating local capacity to generate business partnerships and local services for the mine. Successful pilots, which can implement participatory monitoring and are properly audited, would be the most effective way to achieve a demonstration effect and lead to a more balanced view of the

mining sector. It is also an appropriate way to help create a more favorable social environment for attracting new investments in the mining sector.

Fiscal Transparency and Revenue Distribution

A leitmotif of this report is the stark dichotomy between the mining sector's outstanding growth and prospects and the intractably antagonistic relations of its stakeholders.

To take the first, the Peruvian mining sector reform of the early 1990s attracted substantial exploration and a subsequent increase in mineral production and exports. While global exploration investment went up 90 percent and grew fourfold in Latin America, between 1990 and 1997 in Peru it grew twenty-fold. Due to drastically lower metal commodity prices starting in 1997, the share of exploration investment of most developing countries was reduced substantially since most international mining companies retreated to their traditional exploration areas. Yet Peru was able to keep its share of the total. This increased investment during the 1990s doubled Peru's mineral output and revenue from its mineral exports. Projections for 2005-2007 suggest that the sector could grow at an average rate of 6.6 percent, fuelled mainly by the initial operations of the Alto Chicama project, the extension of Carachugo and the Cerro Negro development by Yanacocha, South America's biggest goldmine. New copper projects are also expected to emerge like Cerro Corona of Gold Fields, an extension of Cerro Verde (primary sulfur project) and new zinc projects, like Cerro Lindo, San Gregorio de Milpo and Brocal.

As for the antagonism, much of it is fuelled by the sheer magnitude of economic contrasts and deeply-rooted social resentment. The largely foreign-owned Yanacocha mining company, for instance, generated exports worth over US\$1 billion dollars in 2003, less than a decade after it began producing in the poverty-stricken department of Cajamarca, ironically the same area in which the Spanish looted the Inca Atahualpa of a roomful of a gold and silver ransom and then executed him. Yanacocha reportedly recovered its initial investment in less than two years. In contrast, this study's statistical findings show that tax receipts from the entire mining sector in Peru were approximately equivalent to US\$300mn in 2003. Through the different redistribution mechanisms discussed in Chapter 5, a little over half that may find its way back to the regions. To cite another stark contrast thrown up by this report, with just US\$200-250 million all Peru's major mining environmental sores (MELs), excluding those for which State mines are or were responsible, could be rehabilitated.

Transparent disclosure of which companies are taxed what and how those proceeds are used by the state (fiscal transparency) may not be enough to overcome historically deep-seated mistrust, but it is surely the only way to trim and manage it. In fact, as this report illustrates, mining enterprises are among the most regulated and transparent industries in Peru. Almost all are listed on the Peruvian and/or international stock markets and their annual reports are therefore audited and published. Some companies are also among the highest taxpayers in the country, however, many of the large mining enterprises have

signed with GOP stability agreements which allows them to have high tax breaks, reducing significantly the percentage of resources collected by the state.

The GOP (through MEM and MEF) has made significant progress in promoting fiscal transparency by working out the mechanics of fiscal instruments for collecting mining resources and information regarding the transfers of mining proceeds by the GOP to regions and municipalities affected by mining activities, particularly with regard to the *canon minero*, which is set at 50 percent of the income tax paid by the mining companies. In spite of this progress, there are still some areas which would benefit from additional interventions to ensure that the capacity is in place to further promote fiscal transparency. The study has concluded that the following areas still require attention: (i) financial disclosure regarding the local management of resources once the mining canon has been disbursed to regions and municipalities; (ii) building capacity at a regional and local level to run an effective accounting system, and ability to finance and monitor projects; (iii) disclosure of revenue source and destination by all stakeholders involved (including civil society and NGOs); and (iv) improving mechanisms for channeling mine proceeds so that they effectively address the environmental and social issues created by mining operations.

The MEF and MEM publish through their respective internet sites the amount to be distributed to regions and municipalities and the formula used to calculate the canon. However, this information is often not accessible to (or understood by) rural communities affected by mining activities since many lack electricity and access to the internet. Thus, the dissemination strategy should take into account the most suitable alternative methods for communicating complex information to those that use it and require it. Recent debates in Congress about the approval of the Mining Royalty Law have brought to light further concerns among various stakeholders about the effectiveness and transparency of the decentralized distribution of funds. These issues can be promoted through the Extractive Industry Transparency Initiative (EITI).

Conflicts in the Peruvian mining sector are not, however, solely the product of disclosure, information, and transparency shortcomings. As this study shows, they are also the product of indecision with respect to the delicate balance between the tax regime's twin objectives: to increase tax collection and to regulate the behavior of taxpayers. In the first case, the government looks for the balance between its tax collection needs and the establishment of a positive system that seeks efficiency and equity and encourages foreign and national investment. In the second case, the government seeks to give guidelines so that the taxpayer can maintain policies that are consistent with the conservation of the environment and corporate social responsibility. Internationally, to achieve these goals different taxation tools are used, such as the offer of tax incentives to offset the cost of actions that contribute to environmental conservation. Tax penalties are also used to discourage practices that negatively affect the environment.

In the case of Peru this rationality is not operating effectively, in part, because of the intense competition with Latin American neighbors to attract foreign investment in the mining sector. Establishing attractive tax structures in order to obtain mining investments

(domestic and foreign) is deemed essential. These attractive tax structures are often characterized by a lack of environmental and social norms, since state intervention through mining sector regulation is considered to discourage private investment through competitiveness losses. However, it is usually a lack of clarity and stability in the rules of the game (fiscal tax structure and licensing regulations) that are the real culprits that discourage mining investments. Hence, this study concludes that the GOP should ensure predictable costs for good environmental citizenship for mining companies through a stable tax regime in order to build a more harmonious relationship between the government, mining companies and local communities and to create a better investment climate.

The study also concludes that it is important for the GOP and/or relevant organizations to provide training to regional and local governments on how to record the acquisition and use of revenues (particularly those obtained from the canon) in a transparent and efficient manner. Furthermore, in line with the decentralization efforts underway in the country, capacity needs to be developed for the management (including financial, accountability and procurement procedures) of funds so that there is greater transparency, trust, and a more efficient use of resources. The study concludes for this particular area the following policy options: (i) fiscal information dissemination at all levels (including regions and municipalities that benefit from mining canon; (ii) revise legislation so regional and local governments have the option to use revenue from canon and royalties for social and environmental projects if deemed a priority issue; (iii) promote technical assistance to enhance regional and local capacity to the rational use of mining proceeds; (iv) incorporate the principles of EITI and Global Reporting Initiative, whereby all stakeholders adhere to fiscal disclosure in order to promote trust and credibility.

Hence, it is essential that government and industry assume their respective roles in contributing to the promotion of environmental and socially responsible mining in Peru. Some areas for intervention are analyzed and outlined in this study, including legal, policy and institutional reforms, economic policy instruments, and voluntary agreements. However, a more proactive government and industry role is not without risks (ranging from ill-conceived policies to the inducement of expectations that might not be fulfilled), which will have to be carefully managed and assessed. Nonetheless, the authors believe the risks can be managed and that the benefits of improving the mining sector outweigh these risks.