

Environmental Management in the Mining Industry¹

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ABSTRACT

The mining industry contributes significantly to the macro and regional economic sector; however, it also potentially creates a significant adverse impact on the environment, which, then, further affects the livelihood of the local community through social changes. Numerous environmental management initiatives have been adopted, designed and implemented by the mining industry, however, protests and social unrest are likely continue to occur. This paper examines how the mining industry could create an effective environmental management system that ensures legal compliance, cost effectiveness and reduction of social conflict.

INTRODUCTION

As a capital and technology intensive frontier industry, the mining industry has a strong impact on the economic and social life of the surrounding community, regional development, and the local ecosystem. The changes occurring frequently elicit negative responses from the local people who feel that they do not get a fair or just share of the benefit in relation to the cost-benefit ratio of operations. However, it is often difficult for the managements of mining companies, which have expended a great deal of effort, time and funding to handle environmental and societal impact problems, to understand the protests and negative reactions from among the local populace. Even though it could be said that the mining industry, in particular the oil and gas sector, is relatively ahead of the field in taking steps to control environmental pollution and handle social problems (through the policy now known as corporate social responsibility).

This paper attempts to review the character of the policies and practices carried out thus far in the mining industry in Indonesia in response to the environmental and social problems arising in the surrounding community. In connection with this matter, the writers will attempt to provide opinions and suggestions, which – hopefully – can be utilized to reorient policies and practices relating to the management of the living environment and to collaboration in handling social issues.

THE NATURE OF ENVIRONMENTAL RESPONSE & SOCIAL RESPONSE

What is defined as environmental response in this paper are the policies, programs, technology, and corporate preventive and mitigative actions taken in relation to the

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environmental impact (physical, chemical, and biological) arising as a result of mining activities. The Environmental Impact Assessment (Analisis Mengenai Dampak Lingkungan, AMDAL) is one of the methods of environmental response, which has been applied frequently in the mining sector since the end of the 1980s. In line with the globalization of environmental issues emerging in the late 1980s, not long after the middle of the 1990s, several of the mining companies in Indonesia began to adopt the practices of the Environmental Audit, the ISO14001 Environmental Management System (EMS), and Cleaner Production, or environmental management systems specifically designed and developed to meet the internal needs of the companies. As a result, organizational units concerned with handling the environment were established with a level of importance equal to that of health and safety and other work units.

The term social response covers the policies, programs and actions taken by the company in handling social issues and problems (including economic issues) arising in the communities in the area surrounding company operations. The social issues and problems dealt with arise from the local communities' demands for employment, protests over compensation for land and environmental damage, as well as requests for assistance with the development of infrastructure on the village/district/municipal level and with provision of scholarships for students of all ages, and even for support facilities for government officials. In most mining companies, these social issues are handled by a social affairs or community development unit, which is different from the safety, health and environmental unit.

The environmental response undertaken by the mining companies could be said to have originated in the understanding of ecological modernization that has been developing since the mid-1980s. Ecological modernization starts from the conviction that ecological crisis can be overcome by technical and procedural innovation (Hajer 1996). In the ecological modernization narrative environmental degradation is not an impediment for growth; quite the contrary, it is the new impetus for economic growth since environmental pollution and degradation is framed as a matter of inefficiency. Ecological modernization, then, is recognized as a new mean for increasing competitive advantage. With the global endorsement of the Brundtland report, *Our Common Future*, and the general acceptance of Agenda 21 at the UN Conference of Environment and Development (UNCED) in 1992, ecological modernization has become the dominant discourse in political debates on ecological affairs (Hajer 1996: 249). Under the influence of this discourse, a new generation of environmental management systems has emerged, such as the EMS ISO 14001, Environmental Audit, Cleaner Production, or Environmental Performance Evaluation programs.

Social issues arising appear to be more complex and difficult to handle than the environmental issues. Whereas the responses to most of the environmental issues that emerge are colored by the understanding of ecological modernization, the social problems arising are not handled sociologically by the companies involved. It could be said that up to the end of the year 2000, any social issues arising had been responded to in an ad-hoc manner by the mining companies, mostly through charitable actions and an orientation toward developing physical facilities. Not infrequently, companies poured large amounts of funds into such activities. However, these types of social responses seemed to have missed the mark in relation to handling the existing problems. There were several reasons for this:

First, the companies generally responded to social issues only after protests, demonstrations and social conflicts had taken place. The dissatisfaction arising at the time of the disbursement of compensation for land used for construction, for example, would not emerge in the form of open conflict until sometimes decades later after being exacerbated by other social problems. This phenomenon occurred in connection with a number of mining activities, such as the oil drilling in Riau and East Kalimantan, tin mining in Bangka-Belitung, gas exploitation in Pagerungan in Sumenep regency, and the geothermal power project in Gunung Salak, West Java. The problem of social issues becomes even more complex when the local people involved continue to adhere to norms, traditions, and customary rights that determine access, utilization and control of natural resources (forests, soil/land, and water), while the mining company holds to positive law, meaning the regulations issued by the government.

Second, the community affairs programs or activities implemented by the companies were frequently not directed systematically enough to be able to overcome the social problems facing the local communities because the local leaders, who had greater access to the company managements, would frequently pressure the companies into following their own special interest agendas.

Third, in their efforts to respond to the social problems arising, the mining companies, in general, did not wish to become too involved in the narration that has now come to be known as community empowerment. As economy-oriented organizations, the companies tended to be selective and set limits in relation to their social responses. At the very least, there were three factors that most frequently became the determining factors in the company's social response affairs; those being power relations, urgencies, and corporate images. While the social problems faced by the public were not easy to resolve because they were, in general, full of structural issues. This situation resulted in the social responses undertaken by the companies being ineffective: the huge amounts of funds provided for social affairs were primarily allocated for activities that did not touch on the needs of the local people. Even though, that same amount of funds could have been utilized for more effective and meaningful social responses. In fact, it is possible that if such social response programs were designed and developed properly, they could result in constructive social change.

In the past few years, in mining company circles, the discourse of Corporate Social Responsibility (CSR) has come to the fore. According to the writers' observations, even the type of social response developed within the context of the CSR blueprint may still require further and deeper observation and analysis because these responses are not yet solid enough based in sociological approaches even though the plans set out include the texts of participation, bottom up, and others of such ilk.

Fourth, there has been a tendency emerging over the past five years (in the post-reform era in Indonesia) to view the negative impact of mining industry activities as sources of potential and actual conflicts whose increasing frequency and escalation can be curbed through the community development approach with the development of community centered programs. The members of each community believe that they must be "assisted" through these community development programs set into motion by the mining industry companies.

Local administrations say that the community development programs have become "formal prerequisites" for mining industry companies as a form of corporate social

responsibility. Companies active in the mining industry implement the community development programs in line with their "own way of seeing things" in order to specifically put an end to conflicts occurring in a pragmatic manner, which results in the community development programs being understood or perceived as being limited to financial, material and physical assistance.

As a result, the community development programs are being implemented on the basis of very different understandings and perceptions on the part of the companies, the local administrations and the local communities. These views often even "run counter" to one another with the meaning of the program straying far from the initial principles of community development, which are rooted in human rights, participatory activities, decentralized programs, empowerment, sustainability, partnership and good governance. Up to now the impression exists that the community development programs implemented in the mining sector "are carried out unilaterally" or are not based on a synergic effort among the community, the government and the mining company. Because of this, it is not surprising that during the operational phase the community development efforts, which were initially expected to function as one of the approaches that could be utilized to overcome negative impacts, such as potential for conflict, actual conflicts, and other social issues, turned out to stir up new problems that created more "friction" among the community, the company and the local government.

Suggestion for Effective Environmental Management

From various experiences in developing environmental management and community development in a number of mining companies, it can be seen that the success of these two programs is strongly determined by the commitment and peak vision of the directors of the company, as well as corporate culture. Many cases indicate that it is not the size of the funding that makes living environment management and community affairs efforts successful, but rather the intensity of commitment from the company's top executives.

From a sociological perspective, it will be necessary to reorient environmental management in relation both philosophical and operational boundaries. In terms of the philosophical boundaries/scope of environmental management, reference must be made to the paradigm of good governance, which emphasizes the principles of trust, transparency, and accountability (Illustration 1). While the operational boundaries must be reoriented through the development of partnership among the community, the mining industry company and the local government.

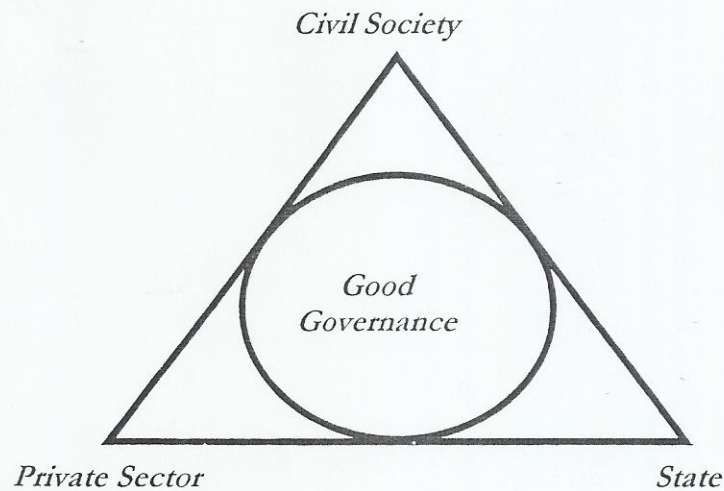


Illustration 1
Good Governance Paradigm in Environmental Management

With reference to the principles of good governance, which emphasize the creation of relationship patterns based on trust, transparency, and accountability (Fukuyama, 2001), it can be understood that effective environmental management can only be achieved through the deconstruction of the patterns of institutional relationships (Brinkerhoff & Goldsmith, 1992). These patterns of institutional relationships within environmental management must be revised in stages so that they no longer have to always be based in the concept of the three "power centers" or stakeholders. The development of institutional relationships (Uphoff, 1986) in the midst of these "power centers" must be done through a variety of activities that create an interaction and community among the various stakeholders. Several suggestions for the reorientation of the operational aspects of environmental management in the mining industry follow.

First, "integration" must be enforced from the outset, both institutionally and operationally, in relation to environmental management and community development. Starting with the pre-construction phase and ensuing throughout the construction and operational (post construction) phases, environmental management must be implemented in line with the community development approach that is based in the principles of human rights, participation, decentralization, empowerment, sustainability, partnership and good governance.

Second, community development oriented environmental management within institutional and operational boundaries should be developed on a subject-to-subject basis involving all concerned/involved parties. The community, the mining company and the local government need to develop communication channels in order to arrive at a unified perception and understanding of "joint actions" to be taken in relation to environmental management.

Third, the phased development of institutional relationships among the community, the mining company and the local government can be initiated through the development of

"stakeholder" relations that shift into a "shareholder" relationship format. These relationship patterns can be developed through interaction and communication among the stakeholders until trust is established within the spirit of transparency and accountability. For example, a number of mining sector companies, among them Hudbay Oil, have developed a process for motivation interaction and communication based on trust through competitions among farming community groups for the conservation of land and water resources, which also involved the local government. These kinds of actions become the initial process for environmental management and the application of the community development approach that is manifested in a joint stakeholder effort. In addition, through this process, a systematic institutionalization must be developed in relation to environmental management that results in the formulation of the institution of shareholder relationships. This kind of pattern results in the formation of institutional relationships among the various "power centers", which can be developed into an "agency" for environmental management, which constitutes the sharing of mining industry companies (for cooperative environmental management) with the local community and administration.

Finally, all three of the suggestions set out above must be integrated through a macro policy that is relevant to the local conditions within the area surrounding the mining industry operations. The results of studies undertaken in the mining areas of Badak and Bontang in East Kalimantan (Hasnawati, 2005) show that the macro indicators for the impact of mining industry activities, such as PAD, PDRB, and the segment of "profit sharing" between the center and the regions, are positive and tend to improve. However, the indicators for micro policy, including community development programs and their impact on the income and standard of living of the local communities, show a trend toward decreased welfare and an increased incidence of conflicts, which have escalated in terms of both intensity and frequency. Although apparent inconsistencies emerge from these macro and micro indicators, more in-depth analysis clarifies that these inconsistencies have occurred as a result of the problems inherent in and emerging from the spatial planning and mining industry policies established and implemented in the initial stages (pre-construction). From that point, within the context of environmental management, these kinds of problems continued to contribute to the "increasing complexity" of the impact on the environment, which in turn affected the operational phase of the mining activities in the concerned areas. Because of this, in order that environmental management become effective, it is vital that these suggestions be implemented in line with the community development approach described above that must be consistently applied in an integrated manner in relation to both vertically imposed macro development policies and the developments occurring within the mining industry. In other words, the macro development policies and the development of the mining sector must "encompass" and accommodate the participation of the various communities, while taking into consideration the aspirations of the public at the micro level.

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